(22,530.)

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1910.

No. 909.

ATLANTIC COAST LINE RAILROAD COMPANY,
PLAINTIFF IN ERROR,

vs.

THE STATE OF GEORGIA.

IN ERROR TO THE COURT OF APPEALS OF THE STATE OF GEORGIA.

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In the Court of Appeals of the State of Georgia, October Term, 1910.

ATLANTIC COAST LINE RAILROAD COMPANY, Plaintiff in Error,

vs.

STATE OF GEORGIA, Defendant in Error.

Decided and Judgment Affirmed January 17th, 1911.

ITED STATES OF AMERICA, ss:

e President of the United States of America to the Honorable the Judges of the Court of Appeals of the State of Georgia, Greeting:

Because in the record and proceedings, as also in the rendition of judgment of a plea which is in the said Court of Appeals of orgia before you or some of you, being the highest court of law or ity of the said State in which a decision could be made in the d action between Atlantic Coast Line Railroad Company, plaintiff error, and the State of Georgia, defendant in error, wherein was wn in question the validity of a treaty or statute of or an authority exercised under the United States, and the decision was inst their validity; or wherein was drawn in question the validity a satute of, or an authority exercised under, said State on the und of their being repugnant to the constitution, treaties or laws the United States, and the decision was in favor of such validity; wherein was drawn in question the construction of a clause of the constitution or of a treaty or statute of or commission held under the United States, and the decision was against the title, right, privilege or immunity specially set up or claimed der such clause of the said Constitution, treaty, statute or commission; or wherein was drawn in question and specially set up and imed a title, right, privilege and immunity under authority of the ited States, and the decision was against the title, right, privilege d immunity specially set up and claimed under authority of the ited States; a manifest error hath happened to the great damage of e said plaintiff in error, Atlantic Coast Line Railroad Company by its complaint appears.

We, being willing that error, if any hath happened, should be ly corrected and full and speedy justice done to the parties aforeid in this behalf, do command you, if judgment be therein given, at then under your seal, distinctly and openly, you send the records d proceedings aforesaid, with all things concerning the same, to e Supreme Court of the United States, together with this writ, so at you have the same in the said Supreme Court at Washington ithin thirty days from the date hereof, that the record and proedings aforesaid being inspected, the said Supreme Court may use further to be done therein to correct that error, what of right d according to law and according to the laws and customs of the nited States should be done.

Witness the Honorable Edward D. White, Chief Justice of the said Supreme Court, the 17th day of January in the Year of our Lord 1911.

[Seal U. S. Circuit Court, N. D. Georgia.]

O. C. FULLER,
Clerk of the United States Circuit Court for the Northern District of Georgia.

Allowed by
BENJAMIN H. HILL,
Chief Judge Court of Appeals of the State of Georgia, Jan. 17th, 1911.

Filed in office this Jan. 17, 1911.
LOGAN BLECKLEY,
Clerk Court of Appeals of Georgia.

3 UNITED STATES OF AMERICA, *ss:*

To the State of Georgia, Greeting:

You are hereby cited and admonished to be and appear at the Supreme Court of the United States at Washington within thirty days from the date hereof pursuant to a writ of error filed in the clerk's office of the Court of Appeals of Georgia, wherein Atlantic Coast Line Railroad Company is plaintiff in error and you are defendant in error, to show cause, if any there be, why the judgment against said plaintiff in error as in the said writ of error mentioned, should not be corrected, and why speedy justice should not be done to the parties in that behalf.

Witness the Honorable Benjamin H. Hill, Chief Judge of the Court of Appeals of the State of Georgia, this 17th day of January, in the year of Our Lord, 1911.

BENJAMIN H. HILL,
Chief Judge of the Court of Appeals of the State of Georgia.

Filed in office January 17, 1911.
LOGAN BLECKLEY,
Clerk of the Court of Appeals of the State of Georgia.

4 In the Court of Appeals of Georgia, October Term, 1910.

ATLANTIC COAST LINE RAILROAD COMPANY, Plaintiff in Error,
vs.
THE STATE OF GEORGIA, Defendant in Error.

Writ of Error from the Supreme Court of the United States to the Court of Appeals of Georgia.

Service of the Atlantic Coast Line Railway Company's petition for writ of error from the Supreme Court of the United States to the

Court of Appeals of Georgia in the above case is acknowledged. Service is also acknowledged of order allowing said writ of error, assignment of errors and citation. All further service waived.

JOSEPH M. BROWN,
Governor of the State of Georgia.
H. A. HALL,
Attorney General of the State of Georgia.

Filed in office January 17, 1911.

LOGAN BLECKLEY,
Clerk Court of Appeals of Georgia.

5 ***Petition for Writ of Error from the Supreme Court of the United States to the Court of Appeals of the State of Georgia.***

ATLANTIC COAST LINE RAILROAD COMPANY, Plaintiff in Error,
v.
STATE OF GEORGIA, Defendant in Error.

To the Honorable the Court of Appeals of the State of Georgia:

The petition of Atlantic Coast Line Railroad Company by Alexander Hamilton, W. E. Kay, Sanders McDaniel, Robert C. Alston, and Eugene R. Black, its attorneys, showeth:

That on the 17th day of January, 1911, the Court of Appeals of the State of Georgia made and entered a final judgment herein in favor of the defendant in error, the State of Georgia, and against the Atlantic Coast Line Railroad Company, in which judgment and the proceedings held prior thereto in this cause certain errors were committed to the prejudice of this petitioner, Atlantic Coast Line Railroad Company; all of which more in detail appear from the assignment of errors which is filed with this petition.

Atlantic Coast Line Railroad Company further shows that in this action there was drawn in question the validity of a statute of or authority exercised under the State of Georgia on the ground of their being repugnant to the constitution, treaties or laws of the State of Georgia, and the decision was in favor of the validity of the

6 said statute and authority; and in the said action the Atlantic Coast Line Railroad Company specially set up and claimed a title, right, privilege and immunity under the Constitution of the United States, and the decision was against the title, right, privilege and immunity specially set up and claimed under such constitution. And in said action said Atlantic Coast Line Railroad Company specially set up and claimed a title, right, privilege and immunity under the authority of the United States, and the decision was against the title, right, privilege and immunity specially set up and claimed under the authority of the United States, and that therein manifest error hath happened to the prejudice of the Atlantic Coast Line Railroad Company.

Petitioner further shows that the said Court of Appeals of the State of Georgia is the highest court of the said State of Georgia in which a decision in this action and proceeding could be had.

Wherefore Atlantic Coast Line Railroad Company prays that a writ of error may issue in this behalf from the Supreme Court of the United States to the Court of Appeals of the State of Georgia for the correction of the errors so complained of; and that a transcript of the record, proceedings and papers in this cause duly authenticated may be sent to the said Supreme Court of the United States.

This 17 day of January, 1911.

ALEXANDER HAMILTON,
W. E. KAY,
SANDERS McDANIEL,
ROBERT C. ALSTON,
EUGENE R. BLACK,
Attorneys for Petitioner.

7 Filed in office January 17, 1911.

LOGAN BLECKLEY,
Clerk of the Court of Appeals of the State of Georgia.

8 In the Court of Appeals of the State of Georgia, October Term, 1910.

At Law.

ATLANTIC COAST LINE RAILROAD CO., Plaintiff in Error.
v.
STATE OF GEORGIA, Defendant in Error.

This January 17th, 1911, came the plaintiff in error, Atlantic Coast Line Railroad Company, by its attorneys and filed herein and presented to this court its petition praying for the allowance of a writ of error from the Supreme Court of the United States to the Court of Appeals of Georgia intended to be urged by it; praying also that a transcript of the record and proceedings and papers upon which the judgment herein was rendered, duly authenticated, may be sent to the Supreme Court of the United States, and that such other and further proceedings may be had as may be proper in the premises.

On consideration hereof this court being the court rendering the judgment complained of, and the undersigned as Chief Judge of said court, does hereby allow the writ of error, the plaintiff giving and filing herewith an approved bond according to law in the sum of One Thousand ($1000.00) Dollars, which shall operate as a supersedeas bond, and the said writ of error to operate as a supersedeas.

In witness whereof this order allowing said writ of error is signed by Benjamin H. Hill, Chief Judge of the said Court of Ap-
9 peals of the State of Georgia this 17th day of January in the

Year of Our Lord One Thousand Nine Hundred and Eleven, in the City of Atlanta, Georgia.

BENJAMIN H. HILL,
Chief Judge of the Court of Appeals of the State of Georgia.

Filed in office this 17th day of January, 1911.
LOGAN BLECKLEY,
Clerk Court of Appeals of Georgia.

10 In the Court of Appeals of the State of Georgia, October Term, 1910.

ATLANTIC COAST LINE RAILROAD COMPANY
vs.
STATE OF GEORGIA.

In the Matter of Writ of Error from the Supreme Court of the United States of America.

GEORGIA,
Fulton County:

Know all men by these presents that we, Atlantic Coast Line Railroad Company, as principal, and American Surety Company of New York, as surety, a corporation under the laws of the State of New York, are held and firmly bound unto the State of Georgia in the sum of $1,000.00 to be paid to the said obligee, its successors and assigns; for the payment of which well and truly to be made we bind ourselves and our successors jointly and severally by these presents.

Signed with our seals and dated this 17th day of January, A. D. 1911.

Whereas the above named plaintiff in error has prosecuted a writ of error in the Supreme Court of the United States to reverse the judgment rendered in the above entitled action by the Court of Appeals of the State of Georgia:

Now therefore the condition of this obligation is such that if the above named plaintiff in error shall prosecute the said writ of error to effect and answer all costs and damages if it shall fail to
11 make good its plea, then this obligation to be void, otherwise to remain in full force and effect.

ATLANTIC COAST LINE RAILROAD COMPANY,
By McDANIEL, ALSTON & BLACK,
Its Attorneys-at-Law, Principal. [SEAL.]

[Seal American Surety Company of New York.]

AMERICAN SURETY COMPANY OF NEW YORK,
By MARION M. JACKSON,
Resident Vice President;
W. G. LEAS,
Resident Assistant Secretary, Surety.

I hereby approve the foregoing bond and sureties, this 17th day of January, 1911.

BENJAMIN H. HILL,
Chief Judge of the Court of Appeals of the State of Georgia.

Filed in office January 17, 1911.

LOGAN BLECKLEY,
Clerk Court of Appeals of Georgia.

12 In the Court of Appeals of the State of Georgia, October Term, 1910.

ATLANTIC COAST LINE RAILROAD COMPANY
v.
THE STATE OF GEORGIA.

In the Matter of Writ of Error from Supreme Court of the United States of America.

Assignment of Errors.

Atlantic Coast Line Railroad Company, in connection with its petition in the above stated case for a writ of error, makes the following assignment of errors, which it avers occurred upon the trial of the case and in the judgment of the Honorable the Court of Appeals of the State of Georgia, which is the court of last resort in the State of Georgia having jurisdiction of this cause, and before which this cause was heard on appeal from the Honorable the City Court of Richmond County, Georgia:

1.

The Honorable the Court of Appeals of Georgia erred in affirming the judgment of the Court below, to-wit, the City Court of Richmond County, Georgia, in which a judgment was rendered in favor of the State of Georgia finding the defendant, the Atlantic Coast Line Railroad Company, guilty of a misdemeanor as charged in the accusation, to-wit: "For that said defendant, in the county
13 aforesaid, on the 14th day of August, in the Year of Our Lord 1909, with force and arms did, being then and there a railroad company operating in said county, unlawfully fail and refuse to equip and maintain a certain locomotive known as No. 373, and then and there used by said Company to run on its main line after dark, with a good and sufficient headlight which shall consume not less than 23 inches in diameter, said main line then and there not being a portion of the said railroad line, used solely as a yard, spur or side track"; and in not reversing the same, because said judgment and the Act of the Legislature of Georgia on which it was based deny to Atlantic Coast Line Railroad Company the equal protection of the law and take its property without due process of law contrary to the Fourteenth Amendment of the Con-

stitution of the United States of America; and the said judgment and the said act of the Legislature of Georgia on which it is based violate Article One, section 8, clause 3, of the Constitution of the United States, which empowers Congress to regulate commerce among the several States.

2.

That the Honorable the Court of Appeals of Georgia erred in affirming said judgment and in not reversing it, for that in doing so it held that the act of the Legislature of the State of Georgia approved August 17, 1908, found in the published laws of Georgia for 1908 on pages 50 and 51, and entitled "An Act to require
14 all railroad companies in the State, to equip and maintain each and every locomotive used with sufficient electric headlight, to prescribe a punishment for the failure to so equip, and for other purposes," under which the conviction upon which the judgments of the City court of Richmond County and of the Court of Appeals of Georgia were had, was based, and the enforcement thereof, did not contravene that part of the fourteenth amendment to the Constitution of the United States, which provides that "No State * * * shall deprive any person of life, liberty, or property without due process of law" on the ground alleged by this plaintiff in error "that the said act requires defendant (this plaintiff in error) to discontinue the use of property lawfully acquired and lawfully held, although furnishing sufficient and adequate headlight, forces defendant to abandon the use of lamps, reflectors, headlights and material lawfully held, although adequate and sufficient for the production of safe and sufficient headlight, and reasonably adapted to the protection of person and property, whether on the track or on the locomotive and cars; compels defendant (plaintiff in error) to purchase expensive machinery for the purpose of generating a specific current of electricity, and to purchase a reflector of a size designated by the statute, thereby depriving defendant of its right to make contracts and to manage its own business."

15 3.

That the Honorable the Court of Appeals erred in affirming the judgment of the City Court of Richmond, and in not reversing the same for that in doing so it held that the aforementioned act of the Legislature of the State of Georgia of August 17, 1908, upon which this prosecution is founded and the enforcement thereof does not violate so much of the fourteenth amendment to the Constitution of the United States which declares, "No State * * * shall deny to any person within its jurisdiction the equal protection of the laws," on the ground alleged by this plaintiff in error that the said headlight law does not apply equally to all persons and corporations in the same class or similarly situated. Said act makes an unreasonable and arbitrary classification whereby it excludes from the operation of said act receivers operating railroads even though said receivers operate fast trains through cities, towns and thickly settled districts of the State; and further because the said act does

not apply to tram roads, mill roads, or roads engaged principally in lumber or logging transportation in connection with mills, even though the locomotives used therein for a whole or part of their road may be operated at fast speed and through thickly populated districts.

4.

That the said the Honorable the Court of Appeals of the State of Georgia erred in affirming the judgment of the City Court of
16 Richmond County, and in not reversing the same for that in doing so it held that the said Act of the Legislature of the State of Georgia approved on the 17th day of October, 1908, and the enforcement thereof (the said act being the act on which this prosecution is based) did not violate the fourteenth amendment to the Constitution of the United States for that prior to the passage of the said Act this plaintiff in error's locomotives were equipped with oil-burning headlights or with electric headlights different from that prescribed by the Act in question, and that these headlights have in the experience of the plaintiff in error and other railroad companies usually proved reasonably safe and efficient; that to substitute electric headlights of the standard prescribed would entail expense of greater or less amount and would render the value of the oil headlights less or totally destroy them, and would entail upon this plaintiff in error the expenditure of large sums of money and deprive this plaintiff in error of the right to regulate its own business and affairs and cause it to submit to an arbitrary and unreasonable regulation thereof, and thereby deprive it of its property without due process of law.

5.

That the said the Honorable the Court of Appeals of the State of Georgia erred in affirming the judgment of the City Court of Rich-
mond County, Georgia, and in not reversing the same for
17 that in doing so it held that the said Act of the Legislature of Georgia, approved August 17, 1908, on which this prosecution is based, is not void because repugnant to Article 1, section 8, paragraph 3 of the Constitution of the United States, which provides that "Congress * * * shall have power to regulate commerce with foreign nations, among the States and with Indian tribes," on the ground alleged by this plaintiff in error that the enforcement of the said statute and the statute itself interfere with and regulate interstate commerce, hinders and delays the running of locomotives having no such headlight as is required by said statute, although said locomotives are lawfully engaged in hauling cars and trains for interstate commerce; and it makes it unlawful for the defendant or other companies operating interstate railways to use in the State of Georgia locomotives having no headlight of the kind prescribed in said alleged enactment, although said locomotives are lawfully used up to the State line—with the result of delaying interstate commerce and rendering it impossible for interstate railroad companies crossing the Georgia line to conduct their interstate business with usual, customary and proper despatch.

6.

That the Honorable the Court of Appeals of the State of Georgia erred in affirming and not reversing the said judgment of the City Court of Richmond County, for that in doing so it held that
18 notwithstanding this plaintiff in error was engaged in interstate commerce and that the one of its locomotive engines which it failed to equip with the headlight of the kind required by the aforementioned act of the Georgia Legislature approved August 17, 1908, on which act this accusation was based, and the said accusation being likewise based upon the use of said engine when it was engaged in interstate commerce, it being partly run in the State of Georgia and partly in South Carolina, and was, as this plaintiff in error claimed and now claims, exempt from the provisions of the said act on the ground that to apply the same to the operation of said locomotive so engaged would be violative of the provision of the Constitution of the United States in reference to interstate commerce, to-wit, Article 1, section 8, paragraph 3, which provides that "Congress shall have power to regulate commerce with foreign nations, among the States and with the Indian tribes;" which said provision conferred upon Congress, as this plaintiff in error contended and contends, the exclusive power to regulate interstate commerce.

Wherefore Atlantic Coast Line Railroad Company prays that the judgment of the Honorable the Court of Appeals of Georgia in favor of the State of Georgia and against the Atlantic Coast Line Railroad Company be reversed.

This January seventeenth, 1911.

ALEXANDER HAMILTON,
W. E. KAY,
SANDERS McDANIEL,
ROB'T C. ALSTON,
EUGENE R. BLACK,
Attorneys for Atlantic Coast Line Railroad Company, the Plaintiff in Error.

19 Filed in office, January 17, 1911.
LOGAN BLECKLEY,
Clerk Court of Appeals of Georgia.

20 ATLANTIC COAST LINE RAILROAD COMPANY, Plaintiff in Error,
vs.
STATE OF GEORGIA, Defendant in Error.

Writ of Error from the Supreme Court of the United States to the Court of Appeals of the State of Georgia.

There being in the record certain inaccuracies and omissions which constitute defects of form and not of substance, it is hereby agreed and stipulated between plaintiff in error and defendant in error that the following corrections can be made either by the Clerk

of the Court of Appeals before the record goes to the Supreme Court of the United States, or in the latter Court:

"Atlantic Coast Line Railroad Company further shows that in this action there was drawn in question the validity of a statute of or authority exercised under the State of Georgia on the ground of their being repugnant to the constitution, treaties or laws of the State of Georgia."

It is agreed that "the constitution, treaties or laws of the State of Georgia," may be corrected so as to read, "the constitution, treaties or laws of the United States."

It is further agreed that an addition may be made to the portion of the first assignment of error which quotes the accusation of the City Court of Richmond County, as follows:

21 "For that said defendant, in the county aforesaid, on the 14th day of August, in the Year of Our Lord 1909, with force and arms did, being then and there a railroad company operating in said county, unlawfully fail and refuse to equip and maintain a certain locomotive known as No. 373, and then and there used by said company to run on its main line after dark, with a good and sufficient headlight which shall consume not less than 23 inches in diameter," such addition being as follows: "three hundred (300) watts at the arc with a reflector not less," so that the language with the addition shall be as follows:

"For that said defendant, in the county aforesaid, on the 14th day of August, in the year of Our Lord 1909, with force and arms did, being then and there a railroad company operating in said county, unlawfully fail and refuse to equip and maintain a certain locomotive known as No. 373, and then and there used by said company to run on its main line after dark, with a good and sufficient headlight which shall consume not less than 300 watts at the arc with a reflector not less than 23 inches in diameter."

H. A. HALL, *Att'y General,*
Counsel for State of Georgia, Defendant in Error.

22 ALEXANDER HAMILTON,
W. E. KAY,
SANDERS McDANIEL,
ROB'T C. ALSTON,
EUGENE R. BLACK,
Counsel for Atlantic Coast Line Railroad Company, Plaintiff in Error.

Filed in office February 6, 1911.

LOGAN BLECKLEY,
Clerk Court of Appeals of Georgia.

23 STATE OF GEORGIA,
Richmond County:

Be it remembered, that on October 19, 1909, during the September Term, 1909, of the City Court of Richmond County, before the Honorable Wm F. Eve, Judge of said Court, then and there presiding, there came on to be heard the case of the State of Georgia

against the Atlantic Coast Line Railroad Company—the same being an Accusation charging the Defendant with the violation of the Headlight Act of 1908.

The Defendant before pleading to the merits, filed a demurrer which appears in the Record, and after argument thereon, the court overruled the demurrer, to which the defendant then and there excepted, and within the time allowed by law, presented and filed and had made a part of the record, its Bill of Exceptions pendente lite.

That thereafter, and after the demurrer to the accusation had been overruled, the said defendant before pleading to the merits duly filed its special plea in bar, which special plea is a part of the record in this cause.

Thereupon the State demurred to certain portions of the special plea in bar, which said demurrer the court sustained, and to which order sustaining said demurrer to said portions of said special plea in bar, the defendant then and there excepted, and within the time allowed by law, duly presented and had signed and certified
24 its bill of exceptions pendente lite to said decision sustaining said demurrer to said special plea in bar.

That thereafter, the balance of the said special plea in bar came on to be heard, whereupon the defendant offered certain evidence to sustain its plea, to which the State objected, and which objection was sustained, and the evidence excluded.

And thereafter, the defendant offered other evidence to sustain its said plea, and after considering which, the court overruled the said special plea in bar and passed an order to be found in the record.

To which decision, excluding the evidence as aforesaid, and overruling the plea in bar, the defendant within the time allowed by law, duly presented and had filed its bill of exceptions pendente lite, the same being duly made a part of the record in said cause.

That thereafter, the cause proceeded to trial upon the merits, both the State and the defendant introducing testimony, at the conclusion of which the court, sitting without a jury, as allowed by the Act creating the said City Court, found defendant guilty, and imposed a fine of $250 and cost of prosecution.

Thereafter, during the said term, and within the time allowed by law, the defendant duly made its motion for new trial, which was approved by the court, and duly served upon the Solicitor of the said City Court.

25 It was ordered by the court that the said motion for new trial might be heard on January 25, 1910, at which time the defendant might present for approval, the brief of evidence, and amend its motion for new trial, at which time likewise, the court would hear and consider the motion for new trial, and render a decision thereon, in term time or vacation.

Thereafter, on January 25, 1910, in pursuance of and in conformity with the orders of the court, the defendant duly presented and filed its brief of evidence which had been consented to and approved by counsel for both parties, and which brief of evidence was duly approved by the court by an entry thereon.

Thereafter, in pursuance of, and in conformity to orders duly

and previously passed by the court, the defendant filed and presented its amended motion for new trial, which said amended motion the court then and there approved by a written entry on the said amended motion.

Thereafter, the said motion and amended motion for new trial came on for argument, whereupon the court rendered the following judgment:

"The brief of evidence filed in this cause having been approved and the motion for a new trial and the amended motion for new trial having been allowed and approved, and the ground of the said motion and the amended motion having been read and considered;

It is, after argument, ordered and adjudged that the said motion for a new trial and the amended motion for new trial, be
26 and the same is hereby overruled on each and every ground thereof."

WILLIAM F. EVE,
Judge City Court, R. C., Ga.

January 25, 1910.

To which decision overruling said motion and amended motion for new trial on each and every ground thereof, the defendant, the Atlantic Coast Line Railroad Company then and there excepted, and now excepts, and says:

1. That the court erred in overruling said motion for new trial and amended motion for new trial on each and every ground thereof;

2. That the court erred in not granting motion for new trial on each and every ground set out in the motion and amended motion for new trial.

And the court having rendered a final judgment in said cause, the defendant, the Atlantic Coast Line Railroad Company here and now assigns error on its bill of exceptions pendente lite, and on each and every ground set out in the bill of exceptions pendente lite.

Defendant specifies as material to a clear understanding of the errors complained of:

1. The affidavit on which the accusation is based;
2. The accusation and demurrer thereto;
3. The judgment overruling the demurrer.
27 4. Defendant's special plea in bar, with the State's demurrer thereto, and the court's ruling thereon;
5. The finding of the court overruling the special plea in bar;
6. Defendant's entire bill of exceptions, pendente lite;—on which bill of exceptions pendente lite, defendant assigns error;
7. The finding of the court that defendant was guilty;
8. The sentence of the court;
9. The motion for new trial;
10. The brief of evidence, the amended motion for new trial, with the order of approval thereof, and the order overruling the motion and amended motion for new trial.

It being admitted by the counsel for the State, that the motion for new trial, amended motion for new trial, and brief of evidence were duly filed, and that the hearing was in due time, defendant

does not specify the orders of the court relating to the time when the said papers should be filed, and approved, and motion heard.

And now, within the time allowed by law, comes the defendant, the Atlantic Coast Line Railroad Company, and presents this its bill of exceptions, and prays that the same may be signed and certified, that the errors alleged to have been committed may be considered and corrected.

28 This January 25, 1910.

McDANIEL, ALSTON & BLACK,
J. R. LAMAR,
Attorneys for Atlantic Coast Line R. R. Co.

P. O. Address, Atlanta, Ga.
P. O. Address, Augusta, Ga.

29 STATE OF GEORGIA,
Richmond County:

I do certify that the foregoing bill of exceptions is true, and contains all the evidence, and *species* all of the record material to a clear understanding of the errors complained of; and the Clerk of the City Court of Richmond County is hereby ordered to make out a complete copy of such parts of the record in said case as are in this bill of exceptions specified, and certify the same as such, and cause the same to be transmitted to the March Term, 1910 of the Court of Appeals, that the errors alleged to have been committed may be considered and corrected.

This January 25th, 1910.

WILLIAM F. EVE,
Judge of the City Court of Richmond County.

Due and legal service of a copy of the foregoing bill of exceptions acknowledged and all other and further service waived this Jan. 27, 1910.

JAS. C. C. BLACK, JR.,
Solicitor City Court, Richmond Co., Ga.
T. S. FELDER,
Attorneys for State.

Filed in office Jan'y 17, 1910.
D. KERR, *D'p'y Clerk.*

30 STATE OF GEORGIA,
Richmond County:

I, William D'A. Walker, Clerk of the City Court of said County, do hereby certify, that the foregoing is the true and original bill of exceptions, in the case of Atlantic Coast Line Railroad Company, Plaintiff in Error, vs. The State of Georgia, Defendant in Error, and that a copy thereof has been made and is of file in my said office.

I further certify that the City Court of said County, January Term, 1910, has not been finally adjourned.

Witness my official signature and the seal of said Court, this 5th day of February, 1910.

[SEAL.]

WM. D'A. WALKER,
Clerk City Court, Richmond County, Georgia.

31 (Endorsed:) Case No. 2444. Court of Appeals of Georgia. March Term, 1910. Atlantic Coast Line R. Co. v. State. Bill of Exceptions. Filed in office Feb. 8, 1910. W. E. Talley, D. C. C. A. Ga.

32 STATE OF GEORGIA,
Richmond County:

Personally came Guy Sturgis who, on oath, saith that, to the best of his knowledge and belief, Atlantic Coast Line Railroad Company, a corporation doing business in the county and State aforesaid, did, on the 14th day of August in the year 1909 in the County aforesaid, commit the offense of a misdemeanor, and this deponent makes this affidavit that a warrant may issue for its arrest.

(Signed) GUY STURGIS.

Sworn to and subscribed before me this 9th day of September 190-.

(Signed) WILLIAM F. EVE,
Judge City Court of Richmond County, Ga.

STATE OF GEORGIA,
Richmond County:

To any Sheriff, Deputy Sheriff, Constable or Marshal*l* of said State, Greeting:

Guy Sturgis having made oath before me that on the 14th day of August in the year of 1909 in the County aforesaid Atlantic Coast Line Railroad Company, a corporation doing business in the county and State aforesaid did commit the offense of a misdemeanor, you are therefore commanded to arrest the body of the said defendant and bring it before me or some other judicial officer of this
33 State, to be realt with as the law directs. You will also levy on a sufficiency of the property of said defendant to pay the costs in the event of final conviction.

Herein fail not.

(Signed) WILLIAM F. EVE.
Judge City Court, Richmond County, Ga.

STATE OF GEORGIA,
Richmond County:

In the City Court of said County.

Guy Sturgis in the name and behalf of the citizens of Georgia, charges and accuses Atlantic Coast Line Railroad Company, a corporation, doing business in the County and State aforesaid, basing said accusation upon the foregoing affidavit, with the offense of a misdemeanor, for that the said defendant, in the County aforesaid, on the 14th day of August in the year of our Lord One thousand Nine Hundred Nine with force and arms, did, being then and there a railroad company operating a railroad in said County, unlawfully

fail and refuse to equip and maintain a certain locomotive, known as number 373, and then and there used by said company to run on its main line after dark, with a good and sufficient headlight which should consume not less than three hundred watts at the arc and with a reflector not less than twenty-three inches in diameter; said main line then and there not being a portion of said railway line
34 used solely as a yard, spur or sidetrack, contrary to the laws of said State, the good order, peace and dignity thereof.

J. C. C. BLACK, JR.,
Solicitor City Court of Richmond County, Ga.

This 6th day of September, 1909.

GUY STURGIS,
Prosecutor and Accuser.

P. O. Address ——.

35 City Court of Richmond County.

STATE
v.
ATLANTIC COAST LINE RAILROAD CO.

Accusation under Headlight Law.

Demurrer.

And now, on the call of the above stated case, comes the Atlantic Coast Line Railroad Company on arraignment and before plea, and doth demur to the said accusation, and for cause of demurrer *days*:

1.

That said accusation charges defendant with no offense under the laws of Georgia;

For that the said accusation is not based upon the violation of any law of the State of Georgia, but upon an alleged violation of an alleged enactment of the General Assembly of the State of Georgia, approved August 17, 1908 and found in the Published Laws of 1908, on pp. 50 and 51—said alleged enactment being commonly known as the Headlight Law, and in the published acts being entitled: "An Act to require all railroad companies in the State to equip and maintain each and every locomotive used with sufficient electric head-light, to prescribe a punishment for the failure to so equip and for other purposes."—The said alleged enactment commonly known as the "Headlight Law," is not an enactment of the General Assembly of the State of Georgia, and was not passed or enacted
36 in accordance with the requirements of Art. 3, Sec. 7, and Par. 14 of the Constitution of Georgia, (Code 5777) providing that: "No bill shall become a law unless it shall receive a majority of the votes of all the members elected to each house of the General

Assembly, and it shall in every instance so appear on the Journal;"—in this, that it affirmatively appears from the Journals of the General Assembly, (including Senate Journal for 1908, pp. 132, 163, 203, 204, 339, 340, 700 and 701) of which the court takes judicial cognizance that the same did not receive a majority of the votes of all the members elected to said Senate, and was not passed as required by the Constitution of Georgia, Art. 3; Sec. 7, and Par. 14 (Code 5777).

2.

That if the said alleged act approved August 17th, 1908, and known as the "Headlight Law," was adopted in the manner and in the mode required by the Constitution of Georgia, then said act is in violation of the provisions of Art. 3, Sec. 7, Par. 8 of the Constitution of Georgia, (Code 5777) in that the said law contains matter different from what is expressed in the title thereof; and,

3.

Said act known as the headlight law is void, because it violates the provisions of Art. 1, Sec. 1, Par. 3, (Code Section 5700), which provides that: "No person shall be deprived of life, liberty, or property, except by due process of law."

37

4.

Said act violates the provisions of Art. 1, Sec. 1, Par. 2 of the Constitution of Georgia, (Code 5699), which provides that: "Protection to person and property is the paramount duty of government, and shall be impartial and complete."

5.

Said act known as the headlight law is void because it violates the provisions of the 14th amendment to the Constitution of the United States which provides that: "No State shall deprive any person of life, liberty or property, without due process of law."

6.

Said act is void because it violates the provisions of the 14th amendment of the Constitution of the United States which provides that: "No State shall deny to any person within its jurisdiction the equal protection of the laws."

7.

Said act is void — in contravention of Art. 1, Sec. 1, Par. 3 of the Constitution of the United States, which provides that: "Congress shall have power to regulate Commerce with foreign nations among the States, and with Indian tribes."

8.

Said act is void because in violation of Art. 1, Sec. 1, Par. 3 of the Constitution of Georgia (Code Sec. 5700) which provides:
38 "No person shall be deprived of life, liberty or property except by due process of law," in that the said enactment requires defendant to discontinue the use of property already furnishing a sufficient and adequate headlight; forces defendant to abandon the use of material adequate and sufficient for the production of safe and sufficient head light; compels defendant to purchase expensive machinery for the purpose of generating a specific current of electricity as a means for lighting headlights, and compels defendant to purchase a reflector of a size designated by the Statute,—thus not only depriving the defendant of the right to use property already owned, but compelling it to purchase property of a given description and depriving it of its own right to make contracts and manage its own business.

9.

Said act is void because it violates the provisions — Art. 1, Sec. 1, Par. 2 of the Constitution of Georgia (Code 5699) — provides that: "Protection to person and property is the paramount duty of government, and shall be impartial and complete,"—in that the said act does not apply equally to all persons and corporations in the same class or similarly situated; said act makes an unreasonable and arbitrary classification, whereby it excludes from the operation of said act, persons owning and operating railroads, and likewise excludes from the operation of said act, receivers operating railroads, even though said receivers operate fast trains through cities,
39 towns and thickly settled districts of the State; nor does said act apply to "tram roads, mill roads, or roads engaged principally in lumber, or logging transportation in connection with mills," even though locomotives thereon for a whole or part of their route, may be operated at a fast schedule, and through thickly populated districts.

10.

Said act is void because it violates the provisions of the 14th amendment to the Constitution of the United States, which provides that: "No State shall deprive any person of life, liberty, or property without due process of law," in that the said act requires defendant to discontinue the use of property lawfully acquired and lawfully held, although furnishing sufficient and adequate headlight; forces defendant to abandon the use of lamps, reflectors, headlights and material lawfully held, although adequate and sufficient for the production of safe and sufficient headlight and reasonably adapted to the protection of person and property, whether on the track or on the locomotive and cars; compels defendant to purchase expensive machinery for the purpose of generating a specific current of electricity and to purchase a reflector of a size designated by the Statute, thereby depriving defendant of its right to make contracts and to manage its own business.

11.

Said act is void because in violation of the provision of the
40 14th amendment to the Constitution of the United States, which declares: "No State shall deny to any person within its jurisdiction, the equal protection of the laws," in that the said headlight law does not apply equally to all persons and corporations in the same class or similarly situated; said act makes an unreasonable and arbitrary classification, whereby it excludes from the operation of said act, persons owning and operating railroads and likewise excludes from the operation of said act, receivers operating railroads, even though said receivers operate fast trains through cities, towns and thickly settled districts of the State; nor does said act apply to tram-roads, mill roads, or roads engaged principally in lumber or logging transportation in connection with mills—even though the locomotives used thereon for a whole or part of their route, may be operated at fast speed, and through thickly populated districts.

12.

Because said act commonly known as the headlight law, is a direct and unreasonable interference with and regulation of Interstate Commerce, and the operation of trains used and operated in interstate commerce, in violation of Article 1, sec. 8, and Paragraph 3 of the Constitution of the United States, which provided that: "Congress shall have power to regulate commerce with foreign nations, among the States, and with the Indian tribes,"—in that the enforcement of said Statute and said Statute itself interferes wih and regulates
41 interstate commerce; hinders and delays the running of locomotives having no such headlight as is required by said statute although said locomotives are lawfully engaged in hauling cars and trains for interstate commerce; make it unlawful for defendant or other companies operating interstate railroads, to use in the State of Georgia, locomotives having no headlight of the kind described in said alleged enactment, although said locomotives are lawfully used up to the State line—all with the result of delaying interstate commerce and rendering it impossible for interstate railroad companies crossing the Georgia line, to conduct their interstate business with usual, customary, and proper dispatch.

Wherefore defendant prays, That this, its demurrer, be sustained, and said accusation quashed.

J. R. LAMAR,
McDANIEL, ALSTON & BLACK,
Attorneys for Atlantic Coast Line R. R. Co.

Upon consideration of this demurrer the same is hereby overruled on each and every ground thereof. In open Court Oct. 19, 1909.

WILLIAM F. EVE,
Judge City Court, R. C., Ga.

Min. #55, page 356.

Filed in office October 19, 1909.
D. KERR, *Deputy*.

42 City Court, Richmond County, Ga.

No. —.

STATE OF GEORGIA
v.
ATLANTIC COAST LINE RAILROAD COMPANY.

Accusation.

Now comes the defendant, Atlantic Coast Line Railroad Company, upon being arraigned, and after its demurrer to the indictment has been overruled, and before further pleading, tenders its special plea in bar to said accusation, and for such special plea in bar says:

1. The said accusation is not based upon any valid statute of the State of Georgia, and does not allege the violation of any valid law of the State of Georgia. For that: The said accusation is based upon an alleged enactment of the General Assembly of the State of Georgia approved August 17, 1908, and found in the published laws of 1908 on pages 51 and 51, which said alleged enactement is entitled as follows: "An act to require all railway companies in the State to equip and maintain each and every locomotive used with sufficient electric headlight, to prescribe a punishment for the failure to so equip and for other purposes."

The said alleged enactment is not an enactment of the General Assembly of the State of Georgia, and is not a law of the State of Georgia for this:

a. A bill known as House Bill No. 463 was introduced into the House of Representatives of the General Assembly of Georgia
43 on July 12, 1907, and was adopted by the said House in due and legal form; the said bill as adopted by the said House was in the language and form as it now appears in said published laws. Said bill being the bill out of which this alleged enactment originated.

b. The said bill was then transmitted to the Senate of the State of Georgia and on the 3rd day of July, 1908, was referred to the Committee on Railroads. On the 10th day of July, 1908, the said Committee reported as to said bill as follows:

"Mr. President: The Committee on Railroads has had under consideration the following House Bill, which I am instructed to report back to the Senate with the recommendation that the same do not pass, to wit: 'A bill to require all railway companies to equip locomotives with electric headlights.'

Respectfully submitted,

"W. C. MARTIN,
Chairman."

c. On July 14, 1908, a motion was made that the bill be taken up in the Senate for the purpose of disagreeing to the report of the Committee, the ayes and nays were ordered, and a vote taken by ayes and nays with the result that the ayes received nineteen votes

and the nays eleven. The motion prevailed and the report was disagreed to, and the bill was read the second time.

44 *d.* On July 29, 1908, the Senate met pursuant to previous adjournment, and the continuing special order was taken up, viz:

"By Mr. TIFT:

"A bill to require all railroads in this State to equip locomotives with electric headlights." A substitute was then offered by Senators Martin and Boyd as follows: "A bill to be entitled An Act to authorize the Railroad Commission of this State to require railroad companies and all other persons or partnerships operating railroads in this State to equip locomotives with good and sufficient headlights and for other purposes.

"SECTION 1. Be it enacted by the General Assembly of the State of Georgia, and it is hereby enacted by authority of the same, that the railroad commission in this State is empowered in the exercise of its discretion to require all corporations and other persons or partnerships operating railroads in this State to equip locomotives used by said corporations, person- or partnerships running on the main lines of the railroads owned or operated by the said corporations, persons or partnerships, with good and sufficient headlights, said headlights to be lighted with electricty or other substance which in the opinion of the Commission will best conserve the interest- of all parties concerned. The authority thus vested in said Commission may be exercised by it from time to time in such manner and to such extent as the necessities of the situation may in its

45 opinion demand.

SECTION 2. Be it further enacted that the said Commission shall have authority to provide rules and regulations for the use of such headlights, the manner in which the said locomotives shall be equipped therewith, and for the maintenance thereof, and said Commission shall have authority to impose penalties for the failure of any such corporation, person or partnership to obey the rules and regulations of said Commission made in this behalf to the same extent as the said Commission is now empowered to impose and exact penalties for the violation of other of its orders, rules and regulations.

SECTION 3. Be it further enacted that the powers herein conferred shall not apply to tram roads, mill roads, or roads engaged principally in transporting lumber or in logging transportation in connection with mills.

SECTION 4. Be it further enacted that all laws or parts of laws in conflict herewith be, and the same are, hereby repealed."

Upon the adoption of the substitute the ayes and nays were ordered and the vote was taken thereon by ayes and nays and resulted in 23 ayes and 17 nays, and the substitute was declared adopted.

e. Thereupon the bill was put upon its passage by substitute, and the vote was taken by ayes and nays and resulted in 40 ayes

and no nays. The bill was then declared to have been passed
46 by substitute.

f. The said substitute was then transmitted to the House and the House refused to concur therein and the same was returned to the Senate.

g. On August 12th, 1909, it was moved in the Senate that said bill be taken up for the purpose of reciding from the substitute. On this motion the ayes and nays were ordered and vote was ayes 18, and nays 12. It was thereupon declared that the motion prevailed and the Senate receded.

h. The Senate took no further action in reference to the passage of said bill. The action of the Senate as herein set out is shown by the Journal of that body kept under its authority in obedience to law. All of the facts set out under this plea are shown by the Journal of the Senate kept by the authority of that body and under the laws of this State. The said Senate was at all times herein referred to composed of forty-four members, who had been legally elected thereto.

The aforementioned alleged enactment is not a law for that it was not enacted in accordance with the positive and affirmative requirements of paragraph 14, article 3, section 7 of the Constitution of the State of Georgia, which is as follows: "No bill shall become a law unless it shall receive a majority of the votes of all the members elected to each House of the General Assembly,
47 and it shall in every instance so appear on the Journal."

The Journal of the Senate does not show that the said bill received a majority of the votes of all the members elected to that body; and the said Journal shows that said bill did not receive a majority of the votes of all the members elected to said Senate. The facts attendant upon the passage of said bill through the Senate as those facts are shown by the Journal of the Senate are set forth under the first paragraph of this plea and made a part hereof.

And of this the defendant puts itself upon the Country.

J. R. LAMAR.
McDANIEL, ALSTON & BLACK.
Att'ys for Def't.

Filed in office Oct. 19, 1909.
D. KERR, *D'p'y Clerk.*

48 City Court, Richmond County.

STATE OF GEORGIA
vs.
ATLANTIC COAST LINE RAILROAD CO.

Violation of Headlight Act.

And now comes the State of Georgia, through *H*ames C. C. Black, Jr., Solicitor of said court, and demurs to the first paragraph of the special plea in bar filed by the defendant, as contained in subsection d setting forth a copy of the alleged substitute, on the ground that

the same is insufficient in law and sets up and constitutes no defense to the accusation against the said defendant, and moves to strike that portion of subsection *d*.

JAS. C. C. BLACK, JR.,
Solicitor City Court, R. Co., Ga.,
T. S. FELDER,
Attorneys for State.

After consideration of the foregoing demurrer, it is ordered that the same be sustained and the first paragraph of the special plea in bar filed by the defendant, as contained in subsection *d* setting forth the copy of the alleged substitution, is hereby ordered stricken.

Upon consideration of the balance of said plea and an inspection of the Journals of the House and Senate of the General Assembly of Georgia, and a certified copy of the original act on which
49 the accusation is based as it appears in the office of the Secretary of State, the said plea is overruled.

This 19 day of Oct. 1909.

WILLIAM F. EVE,
Judge City Court, R. Co., Georgia.

50 STATE OF GEORGIA,
Richmond County:

Be it remembered, that on October 19, 1909, during the September term, 1909, of the City Court of Richmond County, before the Honorable William F. Eve, Judge of said court, then and there presiding, there came on to be heard the case of the State of Georgia against the Atlantic Coast Line Railroad Company, the same being an accusation charging said defendant railroad company with a violation of the Headlight Act of 1908;

On the trial of the case, the defendant, before pleading, filed its demurrer, which appears in the record, and, after argument on said demurrer, the court passed the following order:

"Upon consideration of this demurrer, the same is hereby overruled on each and every ground thereof.

In open court, October 19, 1909.

WILLIAM F. EVE,
Judge City Court, R. Co., Ga."

To which decision overruling said demurrer, said Atlantic Coast Line Railroad Company then and there excepted, and now excepts, and says:

(1) That the court erred in overruling said demurrer on each and every ground thereof;

51 (2) That the court erred in not sustaining said demurrer and quashing the accusation.

And now within thirty days from the rendition of said decision, and during the September term, 1909 of said court, the Atlantic Coast Line Railroad Company tenders this, its bill of exceptions pendente lite, and prays that the same may be made a part of the record and ordered to be placed on the records.

Be it remembered that during the September term 1909 of the City Court of Richmond County, towit, on October 19, 1909, and after the demurrer to said accusation had been overruled, said Atlantic Coast Line Railroad Company filed on October 19, 1909, its special plea in bar to the accusation charging it with a violation of the Headlight Act of 1908, which special plea in bar is of file and constitutes a part of the record in this cause.

The State of Georgia by J. C. C. Black, Jr., Solicitor of the City Court, and T. S. Felder, Attorneys for the State, demurred to the first paragraph of the special plea in bar as contained in sub-section "*d*" setting forth a copy of the substitute to said bill alleged in said plea to have been passed by the Senate of the State of Georgia, and, after consideration thereof, the court sustained the demurrer, and ordered that said sub-section "*d*" of paragraph 1 should be stricken.

52 To which decision sustaining said demurrer to said sub-section "*d*" of paragraph 1 of said special plea in bar, the defendant then and there excepted, and now excepts, and says:

(1) That the court erred in sustaining said demurrer to sub-section "*d*" of paragraph 1 of said special plea in bar;

(2) That the court erred in striking said sub-section "*d*".

That thereafter, on the further hearing of said special plea in bar, counsel for the defendant submitted to the court certified copy of the Substitute passed by the Senate, copy of which is hereto attached, but which copy, the court, on motion of the State's counsel, excluded on the ground that the same was inadmissible—which decision excluding said copy of the substitute bill, defendant says was error for that said certified copy of said substitute was inadmissible in evidence and proper to be considered upon a plea attacking the regularity of the passage of the act, and the validity of said Statute;

That thereafter, the hearing of said special plea in bar proceeded, and the court inspected the Journals of the House and Senate of the General Assembly of the State of Georgia for the year 1908, tendered by defendant, and the certified copy of the original act on which said accusation is based tendered by the State—copies of the papers so as aforesaid offered being hereto attached, and made a part hereof, towit:

53 *Substitute for House Bill* 463.

A Bill to be Entitled An Act to Authorize the Railroad Commission of This State to Require Railroad Companies and All Other Persons or Partnerships Operating Railroads in This State to Equip Locomotives with Good and Sufficient Headlights and for Other Purposes.

SECTION 1. Be it enacted by the General Assembly of Georgia and it is hereby enacted by authority of same, that the Railroad Commission of this State is empowered in the exercise of its discretion to require all corporations, persons or partnerships, operating

railroads in this State to equip the locomotives used by said corporation-, person- or partnership- running on the main lines of the railroads owned or operated by the said corporation-, persons or partnerships, with good and sufficient headlights, said headlight- to be lighted with electricity or other substance which in the opinion of the Commission will best conserve the interests of all parties concerned. The authority thus vested in said Commission may be exercised by it from time to time in such manner and to such extent as the necessities of the situation may in its opinion demand.

SECTION 2. Be it further enacted that the said Commission shall have authority to provide rules and regulations for the use of such headlights, the manner in which said locomotives shall be
54 equipped therewith, and for the maintenance thereof; and said Commission shall have authority to impose penalities for the failure of any such corporation, person or partnership to obey the rules and regulations of said Commission made in this behalf to the same extent as the said Commission is now empowered to impose and exact penalties for the violation of other of its orders, rules and regulations.

SECTION 3. Be it further enacted that the powers herein conferred shall not apply to tram roads, mill roads, or roads engaged principally in transporting lumber or in logging transportation in connection with mills.

SECTION 4. Be it further enacted that all laws and parts of laws in conflict herewith be, and the same are, hereby repealed.

Substitute for House Bill No. 463.

A Bill to be Entitled An Act to Authorize the Railroad Commission to Require Railroad Companies and Others to Equip Locomotives with Good and Sufficient Headlights and for Other Purposes.

By Mr. Martin of 43rd Dist.

55 STATE OF GEORGIA,
Office of Secretary of State:

I, Philip Cook, Secretary of State of the State of Georgia, do hereby certify, that the two (2) pages of typewritten matter hereto attached contain a true and correct copy of the "Substitute for House Bill 463—A bill to be entitled an Act to authorize the Railroad Commission of this State to require railroad companies and all other persons or partnerships operating railroads in this State to equip locomotives with good and sufficient headlights and for other purposes", as the same appears of file in this office.

In testimony whereof, I have hereunto set my hand and affixed the Seal of my Office, at the Capitol, in the City of Atlanta, this 10th day of September in the year of our Lord One Thousand Nine Hundred and Nine and of the Independence of the United States of America the One Hundred and Thirty-fourth.

PHILIP COOK,
Secretary of State.

56 *"A Bill*

To be Entitled An Act to Require All Railway Companies in the State to Equip All Loc-motives Used in Service on Main Lines with Sufficient Electric Headlight, to Prescribe a Punishment for the Failure so to Equip, and for Other Purposes.

SECTION 1. Be it enacted by the General Assembly of Georgia, and it is hereby enacted by authority of the same, that all railroad companies are hereby required to equip and maintain each and every locomotive used by such company to run on its main line after dark with a good and sufficient headlight, which shall consume not less than three hundred watts at the arc, and with a reflector not less than twenty-three inches in diameter, and to keep the same in good condition. The word- main line as used herein means all portions of the railway line not used solely as yards, spurs and sidetracks.

SECTION 2. Be it further enacted that any railroad company violating this act in any respect shall be liable to indictment as for a misdemeanor in any county in which the locomotive not so equipped and maintained may run, and on conviction shall be punished by fine as prescribed in section 1039 of the Code of 1895.

SECTION 3. Be it further enacted that this act shall go into effect July 1st, 1909.

57 SECTION 4. Provided that this act shall not apply to tram roads, mill roads, and road- engaged principally in lumber or logging transportation in connection with mills.

SECTION 5. Be it further enacted that all laws and parts of laws in conflict with this act be and the same are hereby repealed.

58 Anderson,
O. K. Stubbs.
Do not pass.
W. C. MARTIN, *Chairman.*

Report of com. disagreed to July 14, 1908.
Special order for Tuesday, July 28th, 1908.

In House.

House disagrees to Senate Substitute, Aug. 10, 1908.

JOHN T. BOIFEUILLET,
Clerk of House.

Senate recedes from Substitute.
Ayes, 18.
Nays, 12.
Aug. 12, 1908.

C. S. NORTHERN,
Sec'ty of Senate.

#463.

A Bill to be Entitled an Act to Require all Railway Companies to Equip Locomotives with Electric Headlights, and for Other Purposes.

In House.

Read 1st time, July 12, 1907,
Read 2nd time, July 20, 1907,
Read 3rd time, July 1, 1908, and passed.
Ayes, 131, Nays, 0.

JOHN T. BOIFEUILLET,
Clerk of House.

In Senate.

Read 1st time, July 3rd, 1908.
Read 2nd time, July 14, 1908.
Read 3rd time, July 29, 1908, and passed by substitute.
Ayes 40, Nays 0.

C. S. NORTHERN,
Sec't'y of Senate.

By Mr. Tift of Dougherty, Railroads.

59 House Calendar 1907-8. Page 155.

463.

Tift of Dougherty.

A Bill to Require all Railway Companies to Equip Locomotives with Electric Head Lights.

Read 1st time, July 12, 1907.
Read 2nd time, July 20, 1907.
Read 3rd time, July 1, 1908, and passed as amended.
Ayes 131, Nays 0.
Senate substitute disagreed to Aug. 10, 1908.
Sp. Judy.

Senate Calendar 1907-8. Page 107.

No. 463.

Mr. Tift of Dougherty.

A Bill to Require all Railway Companies to Equip Locomotives with Electric Headlights.

Railroads.

Read 1st time, July 3, 1908.
Read 2nd time, July 14, 1908.
Read 3rd time, July 29th, 1908, and passed by substitute.
Ayes 40, Nays 0.
Senate receded from substitute August 12, 1908.
Ayes 18, Nays 12.

60 SENATE CHAMBER, ATLANTA, GA.,
FRIDAY, *July* 3, 1908.

The Senate met in accordance with adjournment at 10 o'clock and was called to order by the President.

The following House bill was read the first time:

By Mr. TIFT: A Bill to require all railway companies to equip locomotives with electric headlights, and for other purposes—

Referred to Committee on Railroads.

SENATE CHAMBER, ATLANTA, GA.,
FRIDAY, *July* 10, 1908.

The Senate met pursuant to adjournment at 10 o'clock; was called to order by the President pro-tem.

Mr. Martin, Chairman of the Railroad Committee, substituted the following Report:

Mr. PRESIDENT: The Committee on Railroads has had under consideration the following House Bill, which I am instructed to report back to the Senate with the recommendation that the same do not pass, to wit:

A bill to require all railway companies to equip locomotives with electric headlights.

Respectfully submitted,

W. C. MARTIN, *Chairman*.

61 SENATE CHAMBER, ATLANTA, GA.,
TUESDAY, *July* 14, 1908.

The Senate met pursuant to adjournment at 10 o'clock, was called to order by the President pro-tem.

Mr. Knight moved to take up the following Bills of the House with * * * report from the Committee for the purpose of disagreeing to the report of the Committee:

By Mr. TIFT: A Bill to require all railway companies to equip locomotives with electric headlights.

Upon the motion to disagree to the report of the Committee, the ayes and nays were ordered, and vote is as follows:

Those voting in the affirmative were:

Aiken.	Henderson of 39th.	Stapleton.
Boyd.	Howard.	Steed.
Cowart.	Johnson.	Walden.
Crittenden.	Knight.	Walker.
Felder.	Lashley.	Weaver.
Felts.	Peacock.	Williford.
Hardman.		

Those voting in the negative were:

Brock.	Deen.	Hawes.
Bush.	Martin.	Whaley.
Farmer.	Mattox.	Wilkes.
Henderson of 15th.	Turner.	

62 Those not voting were Messrs. Born, Brantley, Camp, Dobbs, Gordy, Griffin, Hays, Hudson, Hughes, Overstreet, Stephens, Sikes, Taylor, Mr. President.

Ayes 19, Nays 11.

The motion prevailed and the Report was disagreed to, and the bill was read second time.

On motion, the Senate adjourned until tomorrow morning, at 10 o'clock.

SENATE CHAMBER, ATLANTA, GA.,
WEDNESDAY, *July* 29, 1908.

The Senate met pursuant to adjournment at 10 o'clock, was called to order by the President.

The following continued special Order was taken up:

By Mr. TIFT: A bill to require all railroads in this State to equip locomotives with electric headlights.

On the substitute offered by Senators Martin and Boyd, the ayes and nays were ordered, and the vote is as follows:

Those voting in the affirmative were Messrs. Boyd, Brantley, Brock, Camp, Crittenden, Deen, Farmer, Hawes, Hayes, Henderson of 15th, Hudson, Hughes, Johnson, Martin, Mattox, Overstreet, Peacock, Stephens, Sikes, Taylor, Turner, Whaley, Wilkes.

63 Those voting in the negative were Messrs.:

Akin, Born, Dobbs, Feldern, Felts, Gordy, Griffin, Henderson of the 30th, Howard, Knight, Lashley, Stapleton, Steed Walden, Walker, Weaver, Williford.

Those not voting were Messrs.:

Bush, Cowart, Hardman, Mr. President.

Ayes 23, Nays 17.

The substitute was adopted.

Upon the passage of the bill by substitute, the ayes and nays were ordered, and the vote is as follows: Those voting in the affirmative were Messrs.:

Akin, Born, Boyd, Brantley, Brock, Bush, Camp, Crittenden, Deen, Dobbs, Farmer, Felder, Felts, Gordy, Griffin, Hawes, Hayes, Henderson of the 15th, Henderson of the 30th, Howard, Hudson, Hughes, Johnson, Knight, Lashley, Martin, Mattox, Overstreet, Peacock, Stapleton, Steed, Stephens, Sikes, Taylor, Turner, Walden, Walker, Weaver, Whaley, Wilkes, Williford.

Those not voting were Messrs.:

Cowart, Hardman, Mr. President.

Ayes 40, Nays 0.

The bill having received the requisite constitutional majority was passed by substitute.

64 SENATE CHAMBER, ATLANTA, GA.,
WEDNESDAY, *August* 12, 1908.

The Senate met pursuant to adjournment at 10 o'clock; was called to order by the President.

Mr. Knight moved to take up the following bill of the House for the purpose of receding from Senate substitute.

By Mr. TIFT: A bill to require railroad companies to equip their locomotives with electric headlights.

On this motion, the ayes and nays were ordered, and the vote is as follows:

Those voting in the affirmative were Messrs.:

Akin, Born, Brantley, Dobbs, Felder, Felts, Gordy, Griffin, Henderson of 39th, Hudson, Knight, Overstreet, Stapleton, Steed, Taylor, Walden, Walker, Williford.

Those voting in the negative were Messrs.:

Brock, Camp, Crittenden, Deen, Hardman, Henderson of the 15th, Martin, Peacock, Stephens, Weaver, Wilkes, Hawes, Hayes.

Those not voting were Messrs.:

Boyd, Bush, Cowart, Farmer, Howard, Hughes, Johnson, Lashley, Mattox, Sikes, Turner, Whaley, Mr. President.

Ayes 18, Nays 12.

The motion prevailed, and the Senate receded.

65 The following message was received from the House, through Mr. Boifeuillet, the Clerk thereof:

Mr. PRESIDENT: The House had adopted the following Resolution:

A Resolution notifying the Senate that the House has completed its work, and is ready to adjourn sine die.

The hour of adjournment having arrived, the Senate adjourned sine die.

66 STATE OF GEORGIA,
Office of Secretary of State:

I, Philip Cook, Secretary of State of the State of Georgia do hereby certify, That the six (6) pages of typewritten matter hereto attached, contain a true and correct copy of "A Bill to be entitled an Act to require all Railway Companies in the State to equip all locomotives used in service on main lines with sufficient electric headlights, etc.," with all the endorsements made on back of same, and also true copies from the House and Senate Calendars pertaining to same, and also true copies of the action of the Senate on same bill, on the respective dates therein mentioned, as the same appears of file in this office.

In testimony whereof, I hereunto set my hand and affixed the Seal of My Office, at the Capitol, in the City of Atlanta, this 10th day of September, in the year of our Lord One Thousand Nine Hundred and nine and of the Independence of the United States of America the One Hundred and thirty-fourth.

[Seal of the State of Ga.]

(Signed) PHILIP COOK,
Secretary of State.

67 An Act to require all railway companies in the State to equip all locomotives used in service on main lines with sufficient electric headlight, to prescribe a punishment for the failure to so equip and for other purposes.

SECTION 1. Be it enacted by the General Assembly of Georgia, and it is hereby enacted by authority of the same, That all railroad companies are hereby required to equip and maintain each and every locomotive used by such company to run on its main line after dark with a good and sufficient headlight which shall consume not less than three hundred watts at the arc and with a reflector not less than twenty-three inches in diameter and to keep the same in good condition. The word main line as used herein means all portions of the railway line, not used solely as yards, spurs and sidetracks.

SECTION 2. Be it further enacted that any railroad company violating this Act in any respect, shall be liable to indictment as for a misdemeanor in any county in which the locomotive not so equipped and maintained may run, and on conviction shall be punished by fine as prescribed in Section 1039 of the Code of 1895.

SECTION 3. Be it further enacted that this act shall go into
68 effect July 1st, 1909.

SECTION 4. Provided this act shall not apply to tram roads, mill roads and roads engaged principally in lumber or logging transportation in connection with mills.

SECTION 5. Be it further enacted, that all laws and parts of laws in conflict with this act, be and the same are hereby repealed.

(Signed) JOHN M. SLATON.
Speaker, House Reps.

(Signed) JNO. T. BOIFEUILLET.
Clerk House of Reps

(Signed) J. J. FLYNT.
President of Senate.

(Signed) C. S. NORTHERN.
Sec'y of Senate.

Approved Aug. 17th, 1908.
(Signed) HOKE SMITH.
Governor.

69 (Endorsed thereon is the following:) No. 537. No. 462. An Act to require all railway companies to equip locomotives with electric headlights and for other purposes. O. K. Tuggle. Stubbs.

In House.

Read 1" time, July 12" 1907.
Read 2" time, July 20" 1907.
Read 3" time, July 1" 1908, and passed Ayes 131, Nays 0.
(Signed) JNO. T. BOIFEUILLET.
Clerk House Reps.

In Senate.

Read 1" time, July 3" 1908.
Read 2" time, July 14" 1908.
Read 3" time, July 29",1908, and passed Ayes 40, Nays 0.
(Signed) C. S. NORTHERN,
Sec'y Senate.

70 STATE OF GEORGIA,
Office of Secretary of State:

I, Philip Cook, Secretary of State of the State of Georgia, do hereby certify, That the foregoing 3 pages contain a true and correct copy of the original act with the entries, approval and endorsements thereon as passed by the General Assembly of Georgia, and which was duly deposited in my office and kept therein as required by law and from which the act as contained in the published volume of the "Acts and Resolutions of the General Assembly of the State of Georgia for 1908" on pp. 50 and 51 were duly printed as required by law.

In Testimony Whereof, I have hereunto set my hand and affixed the seal of my Office, at the Capitol, in the City of Atlanta, this 27 day of September in the year of our Lord One Thousand Nine Hundred and nine and of the Independence of the United States of America the One Hundred and thirty-fourth.

[Seal of State of Georgia.]

PHILIP COOK,
Secretary of State.

71 That thereafter, and after the inspection of said certified copies, hereto attached, the court overruled the special plea in bar, and passed the following order:

"Upon consideration of the foregoing demurrer, it is ordered that the same be sustained, and the first paragraph of the Special plea in bar, filed by the defendant, as contained in ub-section "*d*" setting forth the copy of the alleged substitute, is hereby ordered stricken. Upon consideration of the balance of said plea and an inspection of the Journals of the House and Senate of the General Assembly of Georgia, and a certified copy of the original act on which the accusation is based, as it appears in the office of the Secretary of State, the said plea is overruled.

This 19th day of October, 1909.

WILLIAM F. EVE,
Judge City Court, Richmond Co., Ga."

To which decision overruling said plea in bar, the defendant then and there excepted, and now excepts, and says:

(1) That the court erred in sustaining the demurrer to subsection "*d*" of paragraph 1 of said special plea in bar;

(2) That the court erred in refusing to consider the certified copy of the Substitute bill passed by the Senate;

(3) That the court erred in overruling said special plea in bar;

(5) That the court erred in not quashing the accusation.

72 Defendant inserts herein said certified copies inspected upon the hearing of said special plea in bar, and also the certified copy of the substitute, which was stricken, and defendant says that there was no evidence submitted to the court other than that nereinbefore referred to, and that this, its bill of exceptions pendente lite, contains all of the evidence material to a clear understanding of the errors complained of:

Defendant specifies as material to a clear understanding of the errors complained of, the following parts of the record, in the event the cause is by final bill of exceptions carried to the Court of Appeals:

(1) Affidavit of accusation, warrant, accusation, waivers thereon.

(2) The demurrer thereto, with the order overruling the same;

(3) The special plea in bar, with the order of the court striking sub-section "*d*" of paragraph 1, and overruling said plea in bar.

And now during said September term, 1909, of said Court, and within the time allowed by law, comes the Atlantic Coast Line Railroad Company, and tenders this, its bill of exceptions pendente lite and prays that the same may be certified to be true, so that the same may be placed on record, and made a part of the record in

73 said cause, so that, in the event, said cause is at any time hereafter carried to the Court of Appeals, this bill of exceptions pendente lite may be made a part of the record therein, and transmitted to the Court of Appeals.

Oct. 25, 1909.

McDANIEL, ALSTON & BLACK,
J. R. LAMAR,
Attorneys Atlantic Coast Line Railroad Company.

74 STATE OF GEORGIA,
Richmond County:

I do certify that the foregoing bill of exceptions pendente lite is true, and contains all the evidence, and specifies all of the record material to a clear understanding of the errors complained of; And the clerk of the City Court of Richmond County is hereby ordered to place the same on record as a part of the record in said cause of State against Atlantic Coast Line Railroad Company, and transmit the same to the Court of Appeals as a part of the record in said cause, in the event said cause is at any time hereafter carried to the Court of Appeals of Georgia by final bill of exceptions.

This October 25, 1909.

WILLIAM F. EVE,
Judge City Court of Richmond Co., Ga.

Due and legal service of a copy of the foregoing bill of exceptions pendente lite, and certificate of the judge thereon acknowl-

edged. Filing and all other and further service waived, this October 25th, 1909.

JAS. C. C. BLACK,
Solicitor City Court Richmond County.
T. S. FELDER,
Attorneys for State.

Filed in office Nov. 3, 1909.

D. KERR, *D'p'y Clerk.*

75 GEORGIA,
Richmond County:

The defendant, Atlantic Coast Line R. R. Co., waives trial by jury, also waives formal arraignment, and pleads not guilty.

(Signed) McDANIEL, ALSTON & BLACK.
(Signed) J. R. LAMAR, *Defendant's Attorney.*
(Signed) J. C. C. BLACK, JR.,
City Court Solicitor.
(Signed) T. S. FELDER.

This 19 day of October, 1909.

I find the defendant guilty.
This 20 day of Oct. 1909.

(Signed) WILLIAM F. EVE,
Judge City Court Richmond Co., Ga.

City Court of Richmond County.

No. 2865.

STATE
v.
ATLANTIC COAST LINE R. R. Co.

GEORGIA,
Richmond County:

The defendant, Atlantic Coast Line R. R. Co., having been found guilty of the within charge of violating the headlight law act at the present term of the City Court of Richmond County, it is ordered that it do pay the amount of two hundred and fifty dollars and the cost of this prosecution.

This 20 day of Oct. 1909.

(Signed) WILLIAM F. EVE,
Judge City Court Richmond Co., Ga.

Attest:

JAS. C. C. BLACK, JR., *Solicitor.*

76 In City Court of Richmond County, September Term, 1909.

STATE OF GEORGIA
VS.
ATLANTIC COAST LINE R. R. Co.

Accusation for Violation of Headlight Law.

Motion for New Trial.

The above stated case having come on for trial on October 19-20, 1909, during the September term, 1909, of the City Court of Richmond County, before the Honorable William F. Eve, Judge of said Court then and there sitting, hearing said case without a jury, as provided in the Act creating said Court:

And the court, after hearing the evidence, having found the Atlantic Coast Line Railroad Company guilty of the offense charged against it in the accusation, and having sentenced said defendant to pay a fine of $250 and costs of court;

And the said Atlantic Coast Line Railroad Company, being dissatisfied with the judgment of the court finding it guilty.

Now comes the Atlantic Coast Line Railroad Company during the said September term, 1909, of said court, and within thirty days from the rendition of said finding and judgment, and moves the court for a new trial upon the grounds following:

(1) That the finding of the court that the defendant is guilty is contrary to law;

77 (2) That the said finding and judgment of the court is contrary to evidence;

(3) That said finding and judgment of the court is contrary to the decided weight of the evidence.

Wherefore, defendant prays that these, its grounds for motion for new trial be inquired into, and that on the hearing, defendant be allowed to amend these, its grounds for new trial, and add additional grounds, and that, in the meantime, and until the further order of the court, said finding and judgment may be superseded.

McDANIEL, ALSTON & BLACK,
J. S. LAMAR,
Attorneys Atlantic Coast Line R. R. Co.

October 25, 1909.

78 STATE OF GEORGIA
VS.
ATLANTIC COAST LINE R. R. Co.

The foregoing motion for new trial by the Atlantic Coast Line Railroad Company read, considered and approved.

The facts stated in said motion are true, and it is ordered that the State show cause before me, the Judge of the City Court of Richmond County, at the Court House, at 10 a. m., on the 15th day

of November, 1909, or at such other time as the court may fix, why said motion for new trial should not be granted.

It appearing that the evidence has been stenographically reported by the official stenographer of this Court, that the same is lengthy, and cannot be written out without delay, it is ordered that the said defendant have until the final hearing within which to prepare and file a brief of the evidence.

On the final hearing of the motion for new trial, said motion for new trial may be amended and the said brief of evidence may be amended and approved by the court.

This motion for new trial, and this order shall operate as a supersedeas of the judgment and sentence entered herein.

Let a copy of the motion and of this order be served upon
79 the counsel for the State on or before November 15, 1909.

This October 25, 1909.

WILLIAM F. EVE,
Judge City Court of Richmond County, Georgia.

Due and legal service of the foregoing motion for new trial in State v. Atlantic Coast Line Railroad Company, and of the foregoing order therein, acknowledged. Rule nisi, filing, and all other and further service waived, this October 25th, 1909.

JAS. C. C. BLACK, JR.,
Solicitor City Court of Richmond County,
T. S. FELDER,
Attorneys for State.

Filed in office Nov. 3, 1909.

D. KERR, *D'p'y Clerk.*

80 City Court, Richmond County, Ga.

STATE OF GEORGIA
vs.
ATLANTIC COAST LINE RY. CO.

Accusation for Misdemeanor in Violating Headlight Law Approved in 1908.

Brief of the Evidence.

The following is admitted by the defendant: That the defendant, the Atlantic Coast Line Railway Company, is a corporation doing business in the county of Richmond, State of Georgia, and operating a railroad in said county, and was doing business and operating said railroad in said State and County on the 14th day of August, 1909; that said railway company failed and refused to equip and maintain a certain locomotive known as No. 373, then and there used by said railway company on said day to run on its main line after dark, with a good and sufficient headlight, which should consume not less than 300 watts at and arc and with a reflector not less than

23 inches in diameter, as required by the Act of the Legislature approved August 17th, 1908, known as the "Headlight Act", the main line on which said engine was then and there operated not being a portion of said railway line used solely as a yard, spur or sidetrack. It being the purpose of this admission by the defendant to admit a violation of the requirements of said act, subject to the right of the defendant to insist that the said "Headlight Act" was
81 not legally adopted or, if legally adopted, is not constitutional on the grounds set out in its demurrer and pleas.

This 19th day of October, 1909.

A. W. ANDERSON, sworn for the defendant, testified as follows:

I am in charge of the office and yards here in Augusta in which the engines and cars of the Atlantic Coast Line Railroad operate. It is about twenty nine miles from the yard in the City of Augusta and County of Richmond, to the point where the main line of the Atlantic Coast Line reaches the South Carolina line on this branch. It is about four and a half miles from Augusta, Georgia, to the State line, a little below Sand Bar Ferry. We connect with the main line at Robbins S. C. It is about 140 miles from Robbins to Florence, S. C. From here to Florence is about 168 miles. The only offices between Augusta and Robbins, S. C. are Ellenton and Jackson; there are two or three flag stops. There are no stations between Augusta, Georgia and the South Carolina line. We have yards between our office in Augusta and the Savannah River, but there are some points for about the first mile or so from the River that would be unsuitable for yards, because it is flooded with water. It is very low and frequently flooded about a mile or two this side of the South Carolina line. I mean the kind of flood we have several times a year. We cross the Savannah River at the
82 State line on a high trestle work and a steel bridge. We reach the bridge on trestle work and embankment; the trestle is about one half mile from the river, and varies in height from twenty-five to thirty-five feet. Immediately on the banks of the Savannah River, the banks are quite low. There are no houses in that neighborhood, except the one we have on the trestle work. It is on the trestle, fifteen or twenty feet above the ground. That house I don't think has ever been flooded, but the water has been almost up to it. Yes sir; we cross the State line at the Savannah River with a bridge. We count the State line in the center of the stream. Engine No. 373 is what we call a ten-wheel copper head triple expansion engine, made, I think, by the Baldwin Locomotive Works. The Company acquired this engine, as far as I have been able to learn, two or three years ago. No injury to person or property on the train or right of way was ever inflicted by this engine as a result of negligence or of a defective headlight, that I know of. Our records shows no damage to person or property by this engine on account of a defective headlight, that I know of. It is equipped with an oil headlight. The standard headlight of the Coast Line is a 16-inch reflector, with a lens of about the same diameter, and an oil lamp. We think it compares favorably with other oil head-

lights. We think it compares favorably with the standard of other roads in southern territory; they may vary a little; some
83 may be a little larger; I don't know. The Atlantic Coast Line has been using this particular headlight and reflector for several years, to my knowledge. I was connected with them several years ago, and they were using it then. It is used on the very best trains, the Palm Limited and the Florida Special. That is the fastest train they run. It is to handle the through trains in the winter season for the tourist travel. The cars of that train start from Jersey City, and the engine is put on at Richmond and changes at Rocky Mount, Florence and Savannah, and runs to Jacksonville. Our standard headlight, which is on this engine costs a little less than twenty dollars, eighteen or nineteen dollars, in rough numbers, twenty dollars. This reflector could not be used on an electric headlight required by the Gary Act; it would be useless; my recollection is that the law calls for a 28-inch reflector, and this is only 16, and so this couldn't be used.

On the day on which this particular accusation charges the Atlantic Coast Line with operating this engine without an electric headlight on its main line in the night time, it was running between Augusta, Ga., and Florence, S. C., and had been for some time hauling interstate freight. It was engaged in interstate commerce at the time of the accusation. The only work it does over this line is interstate business; they don't do any intra-state business between here and Robbins; it is against our contract. It has been on other runs, too, in Virginia, South Carolina, North Caro-
84 lina and Georgia. This particular engine, in the exigencies of the business of the Atlantic Coast Line, is liable to be used in other States. The nearest Atlantic Coast Line shops are at Florence, S. C.

The Atlantic Coast Line has very few engines equipped with electric headlights; they never equipped any with electric headlights. They have eight, ten, fifteen or twenty. I am connected with the Charleston & Western Carolina Railroad, and we handle the Atlantic Coast Line equipment here, and for about two years I was connected with the Atlantic Coast Line. This particular engine is handled by our shops; we handle the equipment of the Atlantic Coast Line and Central of Georgia here. The Florida Limited, that handles the tourist travel, runs over the Atlantic Coast Line, and uses the oil headlight. I was General Superintendent of about five or six hundred miles over which it ran for two seasons. This particular engine, that the Company is prosecuted for running in violation of the law, never had an electric headlight. In changing the headlights on the engines to comply with this statute, the light on this engine would have to be discarded. You couldn't use that light in compliance with the law; it would be a practical destruction of the property; it would not be worth anything. I don't mean that an oil light cannot be converted into an electric light; I mean that this standard of 16 inches that the Atlantic Coast Line engines are equipped with could not be made to conform with the
85 Georgia law, which requires a 23-inch reflector, because they use the 16-inch headlight, and the law calls for a 23-inch.

Those oil lights could be put on engines that are not required to use electric headlights. Yes sir; they could be put on switch engines.

Probably one engine in ten is a switch engine. As to whether or not a switch engine in operating, is necessarily obliged more or less frequently to go on the main line in the night time, it is owing to the character of the yards; you might not go out of the yard, and be on the main line. Our engines here go across our main lines one hundred times a night, and go on it. Occasionally a switch engine goes outside the yard limits, but very rarely; but they do get on the main line frequently.

They get on the main line because the main line runs through the yards, and in order to get switching points. It is unusual for a switch engine to go out of the yard, but they are occasionally sent out; sometimes they are sent from one yard to another, and they might be sent out on their own steam. If sent from one yard to another, they would run on the main line. They go a hundred times a day on the main line here; it is usually in the yard limits; they rarely go out, but they do go out occasionally. I never heard that it is a rule of the Company that they shall not go out. They are engaged in interstate commerce; they handle interstate commerce all the time; the law applies to them, as well as on the main
86 line. They are handling interstate commerce every minute.

The switch engine shifts cars that are going to be carried out of the State, and in addition, handles cars that have been brought here, and places them. It don't pull cars from one State to another.

After interstate cars, or any other cars, are brought to Augusta, they are handled in the disposition in the yard and the final delivery, which is a part of the interstate business, by switch engines. Whether it is for the Georgia Railroad or any other railroad, it is carried to their yard by switch engines, and they deliver cars to the industries in Augusta. It is the same way with cars going out; they bring it to the yard, and it is moved out by the trains going out. The engineer don't look into the car to see whether he has an interstate shipment or not.

We have different yards in Augusta. These switch engines haul from one yard to the other in Augusta; that is a very large part of their business. No Sir; the track between the yards is not outside the yard. We speak of the yard limit; that means where the engines can go out on the main line without orders for the main line. They can use the main line within the yard limits, but they can't go beyond those limits without getting orders. Then we have to have a yard limit, because there are some men who are only employed within the yard limits, and can not be sent out on the main line beyond. The yard limit in Augusta extends about one and a
87 half miles from our main yard down, and some two or three miles in a westernly direction; it extends up beyond the Warwick Mills. Some parts of that track are laid in the streets of Augusta, and some part is beyond the particular square in which we have that connection of tracks like a fan. The average man would not call it a yard, but I would call it the yard limits. The yard and

the yard limits are very different. Engines can go on the main line in the yard limits without orders.

Our yards and yard limits here are all in Richmond County. When we refer to our yard limit, we mean the territory in which the switch engine is allowed to move without getting orders, and we speak of that as the territory in which yard engineers are allowed and required to do work, and beyond which they are not required to go without additional pay. We have a yard limit, and within that yard limit may be there are several yards, and yard limit might contain a mile of main line without any switches. Nearly every side track and spur in Augusta is within the yard limits, but one. The Atlantic Coast Line has no yards in Augusta; it uses the C. & W. C. Yards, and we take care of their equipment here. The yards of which I speak are the yards of the Atlantic Coast Line here. We have a triple arrangement here, the C. & W. C., Central of Georgia and Atlantic Coast Line; we all use the same utensils here.

88 R. E. SMITH, sworn for the defendant, testified as follows:

I am General Superintendent of Motive Power of the Atlantic Coast Line Railroad Company. I have been connected with railroad machinery about twenty-seven years. I started as an apprentice in the shops, and held various positions, as foreman of the shops, road foreman of engines and superintendent of motive power. I am experienced in the operation of locomotives. The Atlantic Coast Line Railroad has 671 engines. About 115 of them are switch engines. The shops of the Atlantic Coast Line Railroad are located at convenient terminal points and junctions, the location being selected for the most convenient handling of the engines as they come in from their various runs. On some trains from Jacksonville, Florida to Savannah, Georgia, the engines run through directly, and on other runs, change at Waycross. An engine running from Savannah to Charleston would usually change at Charleston; sometimes it runs through to Florence. The Atlantic Coast Line Railroad crosses the State line when it goes out of Savannah towards Charleston, at the Savannah River. It crosses the State line when it goes into Florida, at the St. Mary's River. It crosses the Alabama line, I think, at the Chattahoochee, at a place called Alaga, on the line to High Springs, Florida, some where out in the woods. The terminal shops of the

89 Atlantic Coast Line are located in Georgia at Waycross, Brunswick, Thomasville, Albany and Savannah; in South Carolina, at Charleston, Florence and Sumter. If we want to run an engine from South Carolina into Georgia, and into Augusta, which is equipped with headlights under the South Carolina law, and if the headlight under that law is an oil light with a 16-inch reflector, we would have to stop on the bridge over the Savannah River, remove the oil headlight, and apply the electric headlight, with the various apparatus. It would be necessary at that point to prepare proper facilities for storing the headlights while not in use, and we would have to maintain a force at that point for the purpose of making the changes. The force would have to be maintained there constantly, and would have to be men of more or less skill in making the

changes. I do not think we would find it an easy matter to maintain a force of that character under the adverse conditions that would arise at the State line. It requires a man of electrical knowledge, usually a man who has posted himself on electric ap-aratus, to change an electric headlight; it is necessary to have at present, such men at terminals on all divisions where electric headlights are used. I think it is not practicable to maintain such a force at the State line where the Atlantic Coast Line crosses the State line near Augusta; we cross there on a bridge, and there is a trestle for some distance this side of the bridge. I would consider that it would require a very
90 good workman to remove the electric headlight apparatus and replace it with an oil headlight within an hour. The time consumed would be governed by the character of the different apparatus. The standard headlight which we have been using for at least ten years is a headlight with a 16-inch reflector; it is made by one of the largest manufacturers of locomotive headlights, and is very generally used all over the country; it has been perfected during the years in which it has been in use, and is a very satisfactory oil headlight, and for that reason, is very widely used over the United States. It is used in North Carolina, South Carolina, Florida, Alabama and Georgia; we have bought nothing but this character of headlight during the past ten years. It costs approximately eighteen dollars. The Atlantic Coast Line has some electric headlights, but none with 23 inch reflectors; the reflectors are not over eighteen inches, and most of them sixteen inches. Those electric headlights came to us with the engines that were owned by the Plant System when the Atlantic Coast Line bought it. The Atlantic Coast Line never bought an electric headlight, except with the Plant System. We don't consider it is such a light as we want to put on the locomotives, because it is open to a number of objections. The electric headlight is a very brilliant, intense, blinding light. The tendency on most railroads today, and our line is now going into it very extensively, is to operate its trains by means of fixed signals called block sig-
91 nals. No train is allowed to enter one of these blocks without first having received a clear signal, that is a white light at night. The operator changes the signal by information received from the nearest station by telegraph. That is to say, when the first section of the train has passed, that operator telegraphs back to the nearest station in the rear, and he gives a clear signal to the approaching train to enter the block. If the train has not passed out of the block, or he has received no information, he has no authority to allow the train to enter this block, and holds the signal at red. And the further requirements are that the engineer shall see the signal change when he approaches. The electric headlight is so very bright that it changes the color of those lights on the post. The light which the engineer first sees is red; he must see that change to white. The intense rays of the electric headlight will reflect back from the polished surface of the lens so that the light overcomes the light that has passed through the red lens which gives it its color, and more than that, the effect of the electric headlight on the engineer's eyes in looking into this brilliant light so effects his ability to distinguish colors

and lights that in time he loses his ability to distingush the different signals, and becomes color blind. The effect of an electric headlight, as I have noticed repeatedly on a foggy night or or a night
92 when there is some rain falling, or even if there is a great amount of moisture in the air, is that the light is reflected back from the particles of moisture in the air, so the effect is to shut off the vision beyond a certain point, which is a very short distance. I made an experiment not many weeks ago of that condition; I was on the rear of a train, and stopped at a station where there was a headlight of an engine pointing in the opposite direction, and I sent the yard man down the track in front of the engine; as he started out, he was very plain to the sight, and within a short distance, about three quarters of a city block, he appeared not quite so plain, and as he walked on a little further not much more than a city block, he disappeared from sight just as though he had walked behind a black curtain. I couldn't see the light on the rails, even. The *The* night was clear. There was considerable *due* in the air. I have noticed that effect many times. With an ordinary oil light, I could have seen the man at least two or three city blocks. I have on several occasions been particular to notice how far ahead one could see with a good oil headlight, and I have counted ten telegraph poles repeatedly. That was when I was road foreman, and did considerable night riding. I don't know that I can say how far one can see with an electric headlight under the best conditions, because I have seen so many different conditions; I have seen instances where I could see a short
93 distance, and I have seen some where I could see some distance, and the glare of the tracks could be seen. The effect of approaching an electric headlight on a double track, or on a road approaching an electric car—and I have seen the same effect with lights on automobiles—is to blind the person looking at the light. On my eyes, there seem to be the sands of little points of light, that seem to take up all the space. It is almost impossible to judge the distance of an electric headlight; they appear to be further off than they are, and you are surprised to know how quick they reach you. I understand that my eyes are normal. I have been tested for color blindness, and passed. I think I have excellent eyesight. Some railroad companies started with the use of electric headlights, and abandoned them. The Pennsylvania Railroad and a number of others have tried the electric headlight and abandoned its use on account of the objections I have mentioned, and also on account of the objections made by the people living along their line of road. I understand that the New York, New Haven & Hartford Railroad Co., is using the electric headlight on its electric trains only. I know I have never seen an electric headlight on the Pennsylvania Railroad. Electric headlights are very generally used. All railroads use headlights of some character on their locomotives, to protect their property. I understand that the Southern Railway has some electric head-
94 lights, and the Seaboard Air Line; the Central of Georgia has some, the Norfolk & Western has some, and possibly the Chesapeake & Ohio; I don't know about them. I understand, but I haven't seen them, that some of the western lines are using them.

Just how many are used, I don't know, of my own knowledge. The oil headlights are most used. Engines which are used in one division or one State are very frequently transferred from time to time to another State. Even if the division does not go through two States, it is not unusual to transfer the engines from one State to another. If there is a congestion of freight in Georgia, caused by the peach crop, or some other quickly ripening crop, and the Atlantic Coast Line's power in Georgia is not sufficient to move it, the additional motive power is drawn from where it could be best spared. This is not at all infrequent. Just before leaving Wilmington on this trip, I gave an order for the transfer of engines from Rocky Mount to Florida to meet the business there. Engines are transferred from North Carolina or South Carolina to Georgia, by the Atlantic Coast Line. Engines that are used and equipped for North Carolina are moved into Georgia, and vice versa. The cost of an electric headlight with a 23-inch reflector, and capable of consuming 300 watts per hour at the arc, is approximately $250.00. The cost of the maintenance of such an electric headlight will run, according to the condition of
95 the apparatus, anywhere from $250.00 to $400.00 a year; the steam consumption to produce it is the larger portion of that cost. The electric headlight is operated by steam turbine. I have a portion of one of the machines here, the housing plate. The steam is applied from the boiler; it goes to pipes that lead to a portion of the apparatus called the turbine. That is simply a turbine wheel, and the steam is passed through that, and it revolves probably three thousand revolutions a minute, and that, in turn, operates the electric generator, and the current so generated is conveyed by means of wires which must be perfectly insulated, to the lamp in the headlight where the current is passed through two carbons, the same as a street light. These carbons are not kept in contact; they must be kept apart; if they touch, the lamp goes out. Their separation is maintained by an apparatus for that purpose. That machine is covered by a patent; it is so marked on the machines. The steam is taken from the boiler in about a half or three quarter inch pipe. The pressure there is the same as the pressure in any other part of the boiler. If the pressure is 150 pounds in the boiler, the pressure there would be the same as any other part of the boiler. So much of this steam as goes out of the boiler into the turbine goes out with the same pressure as it goes into the steam chest. In stating that the
96 cost of maintenance and operation is a certain amount, I have included the cost of steam, coal and repairs, the steam being the principal thing. Our records indicate that the annual cost of the oil headlight is about eighteen or twenty dollars; that includes the oil and maintenance. The electric light of the kind referred to in this litigation, is subject to frequent repairs and damage, requiring the services at each terminal of a man specially qualified to maintain them. The usual locomotive engineer is not qualified to repair the more serious breaks in the machines, but some of the little things that happen on the road, they are qualified, if they have the time to do it, but on a fast passenger train the engineer will not stop to repair an electric headlight; he will go right on. There is another objection

to the engineers repairing electric headlights; the effect of magnetism on the watches might cause them to lose time and be defective. The loss of time in the watch of the engineer is a matter of importance; engineers are required to file watch certificates with the assistant watch inspector, and are required to compare their watches with the standard clock and also with the conductor, before leaving on a trip. The watch, on account of the effect of the electric headlight thereon, could lose a few minutes without detection. It is well known that it is a hazardous experience to take a watch into an electric power plant if you think anything of the watch. The matter was given
97 so much attention that there were brought out some years ago, watches that were advertised to be magnetism proof. Any jeweler will tell you of magnetized watches. I don't know whether those watches were magnetism proof, or not. If an engine with one of those headlights equipped in accordance with the act referred to in this litigation breaks down mid-way between stations, and it is a fast passenger train or a fast freight train at night, and the break is such that the engineer could not repair it, he would run in like any other train, on faith. If he didn't do that under this law, and if he wouldn't break the law, he would have to stop there until an engine could be procured. It is possible that that break might occur twenty miles from a station; that break is liable to happen anywhere. It depends on where the train is, as to distances between telegraph stations; I think twenty miles would be considered right far apart. There are many points where telegraph stations are fifteen miles apart. Supposing that break of the headlight happened at a point equally distant between those stations, seven and a half miles from each one, the flagman would go back to protect the rear of the train, and the fireman would go ahead to protect the front end, and the conductor would probably walk to the telegraph station and report the conditions to the despatcher on duty. The despatcher would have to telegraph to the nearest point at which the engines are kept.
98 Our divisions probably average 125 miles in length, some are 200 miles, and the engines are kept at the ends of the divisions. It might occur that the available engine was 100 miles away. Of course, the engine would have to stand still at that time, and wait for it. This piece of machinery that is before me, is a part of the apparatus that generates electricity for the headlight. This is a part of the case enclosing the apparatus to protect it from the elements, and to afford a bearing for the revolving parts. It is a necessary part of the apparatus, though not all of it or the most essential part. It shows the name of the manufacturer, "Pyle National Electric Head Light Company. Patented July 30, 1895, November 5, 1895, November 26, 1895, December 31, 1895. Chicago, U. S. Pyle Compound Steam Turbine. 3." It was taken off one of our locomotives, and shipped here from Waycross, Georgia, from one of the old Plant System engines now owned by the Atlantic Coast Line.

I am General Superintendent of Motive Power with the Atlantic Coast Line. I have general charge of the motive power department, maintenance of locomotives, passenger and freight cars, shops and machinery, working equipment, and general charge and selection of

engines and their handling. I have the same connection with the headlights as other parts of the machinery. I have general charge of the repair and maintenance. By general charge, I mean directing the men that would have the local yards. I said I was the
99 head of the department. The department plans directions, and in a general way controls the policy and operation of that department. The repairs of the locomotives consists in repairing the parts that are worn out. I will answer it all the way: The repair of the locomotives consists in the removal of parts that wear out, driving blocks, etc. That is done by workmen, who have, advising and working over them, sub-foremen; and over the sub-foremen are general foremen or master mechanics, and the next step above is the superintendent of motive power, of whom we have two. I am general superintendent of motive power, and they report to me. I don't repair the engines myself, but I have knowledge of it, and direct it in a general way. When it comes to repairing any defective machinery, it would be impossible for me to do that actually myself. I have nothing to do with the actual repairs on any electrical apparatus. My office is in Wilmington, N. C. We have a number of shops. We have a shop in Richmond County, which does work for us in the same way as our own shops. We have shops in Richmond County, by lease and contract. You are mistaken about my receiving on paper the knowledge that certain work is needed to be done, and I directing it to be done. I receive knowledge by eye sight. I make a personal investigation by a visit to the shops, and by all other means by which other men acquaint themselves with a business. I did not say the engine is not repaired until I saw it;
100 it can be fixed without my seeing it. I do not give directions for individual engines to be fixed without my seeing them. My directions refer to the general policy of the shops, and about repairing all locomotives. Some question as to the individual engine often comes to me for decision. I can make that decision without seeing the engine. I very often do. I never ran as an engineer. As road foreman, I ran trains, and rode on the engine frequently: as a locomotive engineer, so called, never, but I have run an engine. I have never worked in electrical shops. I have been about electrical machinery for the last twenty seven years. Practical repairing of it, I never had to do. I have never been to an electrical college. The difference between an ampere and a watt is this: a watt is the expression of the current; ampere is the figure that represents the size of the current, and volt is the intensity of the current. The product of the volt and the ampere gives you the watts. 790 watts go to make a horse power, I think. I don't want to state that under oath; I haven't qualified as an electrical expert. I stated, as far as I can recollect, it is 790 to the horse power. There are a great many figures I have to handle, and I don't pretend to be conversant with all electric symbols or exact figures, but that is my impression. I don't pretend to be an expert on electricity; I have not qualified as that. I don't know that I have qualified as an expert. I have testified as to what knowledge I have of this question before the
101 court. I didn't qualify as an expert. I would rather anyone else qualified me. I would say this: I think that a man who

has been twenty seven years in the business—you must let me answer my way. I pretend to be an expert in the duties pertaining to my position. I have already stated what my position is. As to how much power it takes to run an electric headlight which consumes three hundred watts at the arc with a 23-inch reflector, reduced to horse power, I don't know that I can tell you the exact figures. I will have to give you the answer to that to the best of my judgment. I should say that the turbine necessary to produce an electric headlight would probably be rated at about ten horse power. I have never made the test myself, of the horse power. Engine 373 would probably develope about one thousand horse power. Taking all the locomotives in Georgia, that I have knowledge of, and taking the engines of the Atlantic Coast Line, that is probably about the average in Georgia. The steam in reaching the electric apparatus, the turbine wheel, is taken from an attachment to the boiler. It has over one half inch entrance—about three quarters. That is what carries the steam from the engine proper to the turbine. You couldn't carry ten horse power through a one fourth inch pipe. I say one half to three fourths inch pipe. I can't say positively that I ever made any special examination. As to how much coal a locomotive the size of this 373 consumes an hour, depends
102 largely upon the size of the train and the speed of the train. I don't know that there is an average. I keep a record of the coal consumption on each train. We haven't any individual records of coal consumption by any particular engine that runs on any particular run. We have our records of coal consumption as a whole. Take a freight train, for instance. What I would consider the average consumption per car mile would be from three to five pounds per car mile, according to the condition of the engine and the efficiency of the engineer and fireman, draft, etc. With a passenger train, it would run from 10, fifteen and eighteen pounds per car mile, so it isn't practicable to state the average consumption of a locomotive. I mean, in reducing the coal consumption to the car mile, we have the total coal consumption and the total car miles made in any one month, and the one divided into the other will give you the average. They are gotten up for comparison from year to year. There is only one way to find out the coal consumption each mile, and that is to take the engines on the road, and make a test. I should say, from my knowledge of the subject, that a freight train running from here to Florence would burn about eight tons. That is 168 miles, I think I heard Mr. Anderson say. I didn't think it was quite so far. I don't know exactly how long it would take to make that run, about eight hours, and burns about eight tons of coal. As to the cost of
the electric headlight, the first cost, I got that information
103 from the same source I get all information that I don't have actual experience of. I understand that the price of the Pyle electric headlight is $200, and the electric headlight case of twenty three inches would be about twenty dollars, and this entire lamp and apparatus, my judgment is that about $250 would cover the cost. I think that would just about cover it. There is freight to be paid on it, too. We have not solicited any quotations. I know Mr.

Scott, of the Georgia Railroad. I don't know whether he ought to be familiar with the price of electric headlights, or not. If he says that $160, would cover it, I am not prepared to accept Mr. Scott's testimony, or any others. I just gave mine in a general way; we were not interested in getting them. My information is that the cost of the lights would be from $250 to $400 a year. I didn't make any tests myself as to the actual coal and steam consumption or any of the other portions of the cost included in that. I got my information just as you got your knowledge of the law, from study. I computed those figures, $400, from the coal consumption; that is the main cost. I didn't say how much coal that consumed. I told you what my general idea of it was. I told you I didn't make any tests. I think I stated sufficiently clearly that my information and my belief was that the cost of running these electric headlights, that burn at the arc 300 watts, ran from $250 to $400. I gave a large latitude. I gave the lowest figures, and stated it might run to $400, due
104 to the condition of the apparatus. After it becomes worn, the generator is less efficient, and takes more steam. You asked me a question, and I will have to answer it in my own way. I have seen engines standing at the stations with steam blowing out of the turbine, showing that they were not generating electricity at all economically. There was a constant stream of steam going away, and I know that that simply means that for every bit of steam that passes out, there has got to be a proportionate consumption of coal. Now, a man notices a great many things without getting any specific knowledge, and I testified from my knowledge of the general subject of steam consumption and the operation of this apparatus. I can't tell you specifically how many tons of coal it takes to run the apparatus one *night* in any individual engine, or on any number of engines, but I can say my information is that it would vary from $250 to $400. I can't tell you how much coal: I can give you the price of coal, divided into $250, and you can tell how much it would take. I can't give you that information in the exact detailed form you want it. I have not made a test of the electric headlight, and measured the water and computed the coal that is necessary to evaporate the water. I gave my figures from the best information I could get, from statements published. Consumption of coal, oil, repair of electrical parts and carbons, entered into the $250 to $400. A good carbon ought to last eight or ten hours. They cost thirty cents per hundred
105 or three cents apiece. I don't know how much oil it uses—not a great quantity. It would not be infinitesimal, because nothing about a locomotive is infinitesimal. There are two or three bearings to be oiled. I think a gallon of oil would run it a year. That is a very small part of the cost. Repairs is another item. I can't remember the figures as to the cost of repairs. I explained very carefully, that I only made an estimate in a general way, as to repairs. I am not an expert in making clear just how much I figured for repairs. I don't remember any amount I put down for repairs, because I didn't confine myself to any specific sum. Labor is another item. I didn't put down anything for labor. I didn't put down any specific sum for labor, because I didn't put down any specific

sum for the total. I didn't sub-divide the total of $250, the way you want. I am superintendent of motive power of a railroad. I am accustomed to figures. I figured on this cost. I stated that it was too expensive to put these headlights on the road. I reached that conclusion, because the first cost of the electric headlights is very considerable, and the coal consumption amounts to a great deal. Interest on the investment and depreciation in value is another item of cost. Five per cent would be a fair interest, and ten per cent or more for depreciation. Depreciation would be about twenty five dollars a year. We keep some figures as to cost of maintenance of oil
106 headlights. When I said eighteen dollars a year, I had a statement made as to the cost of maintaining oil headlights. I can't tell you how much oil one burns in a year, because I haven't burdened my mind with it. If I had been expecting to give detailed information, I would have brought that with me. I think $18.72 was the average cost per annum. The figures don't come to me in the shape of how much oil we use; I don't know that I have knowledge of the average amount of oil used per day or per hour by an oil headlight. I should say that it does not take as much as one hundred gallons per year per headlight. I should say that my judgment in the matter is this: that one quart of oil ought to burn one headlight per trip. We will say a trip is a day's run; that would be 300 quarts a year. I don't recollect the cost of the oil. The purchasing agent is the proper person to testify as to the cost of material. My impression is that kerosene oil is probably between ten and twelve cents a gallon. I said this oil light cost $18.72 per year. Those figures were furnished me by people who had immediate charge of that. A great deal of my information is such that a man in my position must get second-hand. I told you my information as to the cost of electric headlights and oil headlights was such as every man in my position gets from others. I didn't put down anything in my estimate for repairs. It costs money to repair them. I didn't estimate as to the cost of wicks. I took the estimate
107 from the figures furnished me. They didn't put anything down for the cost of wicks. They put anything that was connected with it. They didn't put it down in detail; they gave me the statement of the whole cost. I cannot testify on the detailed cost of maintenance, neither as to the oil or electric, no more than I can testify to the cost of an automobile. I know what an automobile of a certain kind would cost, but I couldn't tell how much the different details would cost. I am not willing, in referring to the electric headlight, to come any closer than from $250 to $400 per year for maintenance; that is the best information I have; if I had the exact figures, I would not have given the maximum and minimum. It requires skill to maintain an electric headlight, the knowledge of their construction and the knowledge of the electric apparatus. The lamps getting out of order is the main thing. I mean the lamp enclosed in the headlight case; I do not mean the glass in front; I mean the lamp that holds the carbons, and the electrical apparatus that holds the carbons. That is enclosed in a metal case, and it has a glass in front, and if the lens breaks, that puts it out of business.

I don't know that the electric headlight runs better without glass. If the glass breaks, and falls back on the light, it will put it out. It is not practicable for the engineer to get the broken glass out,
108 and the light burn on. I have not seen electric headlights burning without glass. I suppose it can be done. I can see how these lights on the street can burn without a glass. The carbons musn't come in contact, or the light will go out. Now that you mention it, I think it is very strange that people put glass in. The carbons in the street lights is very much like those lights. I have seen them burn without globes. I have never seen the electric lights on the engine burn without a globe. I suppose it can. Another thing to get out of order, is the insulation burns out, or gets defective. There are a great many things that can happen to it. And the generator will get out of order, just like the locomotive is possible to get out of order. I have three or four pages of defects that happen at the terminals, if you want it. The electrical apparatus is the most expensive part you have to repair, the armature and fields, which generate the electricity. When they become burned out, they have to be taken out and re-wound. I can't say that that kind of thing happens very infrequently, because on every trip I have made to the shop where electric headlights are maintained, I have always found electric headlights in various stages of dismemberment, showing that they were being taken thoroughly to pieces. I know what the bushing is, yes sir. I don't know how much they cost; I have nothing to do with that; I can't estimate it. I don't know the de-
109 tailed cost of the different parts of the headlight.

I said it required a skilled mechanic to maintain the electric headlight. An ordinary engineer could, if he were sufficiently well acquainted with their maintenance, and had the opportunity. He could not maintain them completely on the road; he would have to take time at the terminals. We maintain men at our shops for that purpose. We don't have an expert to go along the road with the engineer. The engineer looks after that as well as he can. He can put in a new carbon. He cannot put in a new glass face. He can run it without the glas. but I never saw one run without it. You cannot run the oil light without protection. When I say the electric lights have a blinding effect, I mean blinding effect to those opposing the electric headlight, and they also have a similar effect on the engineer who is looking into the shaft of the light, following it. It has this effect on the engineer on the engine to which the light is attached; looking into the light directly in front of the engine, his eye is rather closed up, as it does when looking at a brilliant light, and when he takes his eye off the lighted area, and looks along the side for signals or anything, his eye is not in a position to quickly see objects in the dark area after having been looking constantly into the bright area. That is always true. That only supports the statement I made. I probably cannot testify as an expert on the subject of whether the electric light has any
110 more effect in that way than any other light, but I am acquainted with the electric light. The so-called violet rays do have a permanent effect on the eyes. Yes, sir; I mean when he looks at the light. The headlight is in front of the engine. I am

not prepared to say that when he is following the rays of light; it does not hurt the eyes. No; I cannot say that it will. When I say that it has a blinding effect, I mean to say that the light is so bright that when he left the light, the darkness looked darker. Yes, sir; the semaphore is the signal along the track that is right at the side of the track. It is about fifteen or twenty feet from the track. Yes; the engineer is supposed to look forward and see that. No; there is no necessity why he should look into the electric light; and then turn his eyes in the dark to see the semaphore, but men riding engines at night must know where they are; it is not uncommon, in fogs, for him not to know where he is. Yes; he ought to know where he is, regardless of the semaphore; he ought to know when he is approaching a station or slow order. We are prepared to testify that the electric light will not show the semaphore signal, which is close to the track, before the oil light would. I cant' admit that statement, that the electric light will show the signal quicker than the oil light. I testified this morning, that you cannot always see further down the track with a bright electric light.

I testify the same now. The experiment I referred to this
111 morning was made on a cloudless night, where the man on the track disappeared within a street block. As to whether, under normal conditions, you can see an object down the track in front of an engine further with an electric light or an oil light, you will have to define what normal conditions are. I should say that the term "normal night" is not a very good expression to use. I should say that you can see further with the electric light on a perfectly dry, clear night, not necessarily clear over head. The important thing about seeing to the greatest distance with any kind of light is to have the atmosphere free from moisture. I stated this morning, I have seen ten telegraph poles in advance with the oil headlight. That was about 1800 feet above sea level, where the air was supposed to be pretty free from moisture, and it was at night. I don't know how much dew was in the air. As to whether I pretend to swear you can't see further with the electric light than with the oil light sometimes, I have got to answer it my way. I am prepared to swear that I have seen electric headlights at night when the space in front of the engine was very brightly lighted, and also when nothing could be distinguished clearly. I am not prepared to admit that you can see further with the electric headlight than with the oil headlight. I didn't say I don't know whether you can or not; there are conditions under which you can see further with the oil light, and some with the electric light. I stated before
112 that the condition under which you can see further with the electric light, would be in a night when the air was very free from moisture and dry. I am not prepared to state how far you can see on a night like that with an electric light—how many telegraph poles, or how many yards. I don't think you can see more than ten telegraphs poles. I am not prepared to state how many. No; I don't know how far up the track I could have seen the man with the oil light; I did not make that test. Yes; I think the oil rays penetrate the atmosphere better than the electric light, because the extreme brightness of the electric light makes the rays reflect back

from the particles of moisture in the air. To say that the extreme strength makes it reflect back, might be one way of stating it; I would say on account of the extreme brightness and whiteness, it was taken up and reflected back by the particles of moisture in the air. As to whether I know that under the conditions I speak of, I couldn't see more with the oil light, I know I have seen an oil light on a straight track for thirty miles. No; the engineer could not see the thirty miles. I don't know how far he could see. I reckon it is like holding a lighted lantern in the rain, it gives no light to the man with it, but it can be seen by others for some distance. I am not prepared to say that the man on the engine could not see as far as the man on the lighted track; you are telling me this. In the experiment I spoke of, where the man was sent out ahead,
113 I think an engineer with an oil light could have seen further than one with the electric light, because the rays of the oil light are more penetrating than the electric light; the damp atmosphere don't reflect it back as much as the electric light. No; I have not made any experiment along the line of electric lights changing the color of signals; I have known of it. I don't know that I know that electric light is nearer to daylight than any other. I am not prepared to answer whether electric light is nearer to day light than oil light. In speaking of the electric light changing the color of signals, I mean it makes the red signal look like a white one. Yes; I mean that the red light in front of the electric light is made to look like a white signal. I have not had that in my experience. I believe from the information I have that it is true. I think that probably the electric headlight people themselves are aware of that fact. I am not prepared to say that an engineer who has run for any considerable time behind an electric headlight has not lost his sense of color. I don't think it improbable that he has lost his sense of color. No; I am not prepared to say that he has; I think it is a very important question; if men who have been running behind electric headlights have lost their sense of color, I think it is a very serious question. Information I have got from study and reading leads me to believe that there is a strong probability that he has lost it. No; I have never known
114 anybody that has. Of course, I don't know that the railroads have taken their engineers that have been running behind electric headlights, and have put them through the signal test for color blindness. The color test is one of the examinations when he enters; I don't know that the railroads that have been using the electric headlights ever tested them again. No; I don't know that it was not. Yes, if there was any question, they would; but I know one engineer that ran twenty years who had no color sense; he depended in his fireman to direct him. He was using the oil headlight, but he was naturally color blind. Yes sir, I only knew of one case of color blindness within my knowledge. No; my own railroads have not been using electric headlights for fifteen years. No; the Georgia, Florida & Southern has not used them fifteen years. My knowledge only goes back to the time we took the Plant System, in 1904. Yes, sir; we have been using them on the Plant System since 1904. I do not know that other roads

used it before that, in Georgia; I never saw an electric headlight in Georgia prior to that time. There are thirty eight telegraph poles to the mile; I think they are about 150 or 125 feet apart They space them uniformly; the distance apart depends on the number of wires they carry.

Yes, sir; I said something about the Pennsylvania Railroad giving up electric headlights. No, sir; I do not know that of my own knowledge, only as common knowledge. I do not know that the only place where they have given up electric headlights is
115 where they have four tracks. There is a great deal of the Pennsylvania Railroad double tracked. I am giving you what knowledge I had. I didn't see the order discontinuing the electric headlights. Yes, sir; I have seen the road running with oil headlights, between Washington and New York, and between New York and Pittsburg. As to whether I know that the only places where they use oil lights, there are four tracks, and the tracks are fenced in, and the towns are so close together that the tracks are practically lighted by electricity anyway, and that there had been complaints from the inhabitants, I know there were complaints from the inhabitants. I do not know that on the principal lines of the Pennsylvania Railroad, they *used* the electric headlights now; my knowledge is quite to the contrary. I got my knowledge from travel on the line between Washington and New York and New York and Pittsburg. The reason they gave them up, they are objectionable on double track, and besides, the people along the line kicked about it, and they interfere with signals. I read that in a number of technical papers, and with my own eyesight I saw the oil-lights. Yes; I stated this morning that if we put an engineer on a train, he was forced to run across the state line, and continue interstate traffic. The engineers are usually confined to the territory in which they reside, and in which they live, but they do frequently cross the state lines on their regular trips. For instance, a train leaving Florence, South Carolina, for
116 Augusta, Georgia, would have to cross into Georgia, and the one going to Rocky Mount would have to cross into North Carolina, and then cross from North Carolina to Virginia. That would be on their regular run, and so coming south. The state line has nothing to do with the assignment of men to the territory. No; I didn't mean to say that a green man would be put on the interstate traffic; I mean engineers don't change at state lines. If an engineer had been running with an oil headlight, and is transferred to an electric headlight, I don't think it would take a great while for the engineer to start the electric headlight; that is all he has to do. A man of intelligence ought to be able to learn to start an electric headlight in fifteen minutes. Just how long it would require to connect up, would depend on the man. Yes, it would require some intelligence; an engineer has to have some intelligence. I think it isn't impossible to teach an engineer to keep that in order. No, sir; we don't have an expert electrician to go along with him. As to whether I mean that the current passing the engineer to light the electric headlight would affect his watch, it is not a matter of my own knowledge. I don't know that I can testify

on that point, but it is my information that the watches of engineers who have worked around the headlight, or putting in a new carbon when the electric light is running, or in any way getting close enough to the generating apparatus to get within the
117 field of magnetism that is supposed to exist around the apparatus, become magnetized. Yes, sir; I have heard something serious about that from the railroads that use the electric headlights. It is rather the statement of fact that is borne out by theory. Whether it is a fact or not, I would advise that the watches be kept in the cab when the engineer goes near the headlight.

The Central of Georgia Railway uses the electric headlight. I don't know how long they have been using them. I presume they use the signal lights; I don't know. I suppose unquestionably they use the same kind of signal lights we do. The Georgia, Southern & Florida uses the electric headlights. I don't know whether they have used them for a great many years or not. I have known it since we have had the Plant System, since 1904. Yes, sir; we are using the standard signals, red, white, green and blue. Yes; I think the Southern uses the electric headlights. I can't testify whether the Southern's headlights change the signal lights, or not; I have been on the Southern very little. No sir; I have never been on an engine that has changed a signal light. My testimony this morning is information I have from creditable sources. Yes sir; these roads in Georgia are using the same kind of signals as our road. I don't know of any other road in Georgia that uses the electric headlight. I don't know how long the electric headlight has been used in the United States. You probably have the records, and I couldn't
118 question them at all. Yes, sir; we continue to use the ones we have. Yes sir; we are using the same kind of colored signals. No sir; we haven't changed our signals on account of these electric headlights we bought; we haven't changed the standard colors, but we have greatly extended the number of them; we have put in a great many block signals and block stations, for the safe operation of trains. No; we didn't do it on account of the electric headlights, for the safe operation of trains, like everything else. Yes sir; we use the electric headlights on the engines we have, and we use the same kind of signals. I don't say that the engine light changes them in all cases; if I gave that impression, I didn't mean it The electric headlight under certain conditions, is liable to, and does change red signals to white, when the light strikes the lens at the proper angle. I couldn't tell you what the proper angle is, in figures; I don't know that anybody does. No sir; I do not know of any signal light that has been changed, of my own knowledge, on our own road, where we run both the oil lights and the electric lights. No; I don't think we have had any complaints of it, but this is a very serious question. I have not known on my line, since we have been running the electric headlight, an instance where the signal was changed. Yes sir; it is true, that wherever we have a night signal, we have a day signal. If the electric headlight lights
119 upon the signal and it happens to change the night signal, the day signal would appear and warn the engineer, if the

engineer was able to see it. I don't want to say that, if he couldn't see the night signal, and the light was bright enough, he could see the day signal, because I have the same kind of testimony about that; there would be some very surprising testimony along that line. The day signal is a position signal, and not necessarily a colored signal. The engineer, with that condition of the atmosphere I described, running a fast train on a wet night, would not be able to detect that day signal as far as he would the light. He might see the light a long distance if the conditions were favorable, and when there were conditions that would prevent his seeing the day signal. You can see the day signal on a bright day half a mile. I don't admit that if the electric headlight would throw the light that far, you could see the day signal that far at night. Under certain conditions, he would not see it at all. The engineer might see the signal ninety nine times out of a hundred, and everything go right, but the one hundredth time he might not see it, and an accident might happen. It has to be done with certainty every time. It is not true that the brighter the light the further he can see the signal, not with the electric light, because the brightness of the light is what interferes with his seeing the signal light under those conditions.

120 Yes; the signal light is an oil light. He could see that within a certain distance, on a rainy night. Signals are to control the movement of trains, and show the positions of switches, and whether the tracks are clear of other trains. The idea I meant to convey this morning in my testimony in reference to the escaping of steam on an engine on which there was an electric headlight was this: that when the turbine operating the generator is worn, steam will blow by it without doing any useful work; the steam consumption will be heavier. Yes sir; that is true about any part of the machinery. The thing to do is to keep that in order, but the keeping of an apparatus of this kind in order would mean practically a renewal of the principal parts. Yes sir; it certainly does wear out. The turbine makes 3,000 revolutions per minute. No; I am not certain of that. No; I don't know that that would burn the lights out. No; I don't know that about 1700 is the standard; I know that 3000 is not high for a turbine; some run 15000. I have been so little interested in electric headlights until this thing came up, that I never posted myself on how many revolutions it makes. No; I have no information as to those details.

As to whether I have any details on the cost of equipping and maintaining the electric light of the kind referred to in this litigation, I have studied that often, as I stated this morning, and I have gone over a number of figures that have been prepared by others

121 that I need to pass my judgment upon, and I felt that they were reasonably correct because they lined up with my experience in other lines. I have not taken the turbine and made the test myself, run the turbine for a certain length of time and seen the amount of coal consumed, and evaporated the water. Yes; I have some figures made by Mr. Curtis, Superintendent of Motive Power of the L. & N. Railroad, and the similar officer on the Central of Georgia. Yes; I have taken those figures and studied

them by applying my own experience to them; I have gone over those figures, and they seem reasonable to me. When I said there was a day signal and a night signal, I meant that the day signal is a semaphore arm made of wood and painted various colors, according to the character of the signal. A night signal is a lantern in a lens of different colors. Yes sir; the semaphore arm is on a post on the edge of the track; it is placed in different positions for different signals. As to whether there are any other lights besides the night signal that would indicate the day signal to you, there is a train order signal which is suspended from the semaphore arm. Yes sir; the disobedience of those signals is attended with very great danger. No sir; I did not mean two lights when I said there was a day signal and a night signal; it is the position of the semaphore that counts. When it is this way (indicating straight out) it means to stop, and when it is this way (pointing down) it is the signal that the track is clear. There may or may not be two lights found on this
122 signal at night. The light that controls the movement of the train is a signal light.

Yes sir; the semaphore arm is for the day signal, and the light is for the night signal. When the day signal is sprung, it also springs the night signal. The night signal is usually an oil lamp. Yes sir; when that arm goes backward or forward, that light is changed in the same way. Yes sir; when the signal with the semaphore is given, it gives both the day signal and the night signal for the same purpose. In reference to the lights on the switch signal, we also have a day signal and a night signal; the night signal is a light and the day signal is a cross arrangement of signals on top of the lamp; it is a cross, one side red and the other white. When it is thrown, it shows both the day signal and the night signal. At night, we have a light there. I don't know whether, if you don't see the night signal, you see the other. Yes; it is there, but I am not prepared to say you can see it. I said this electric headlight is more of a steam engineering matter than an electrical matter, because I stated to his Honor that I could not qualify as an electrical expert, and I therefore couldn't answer his question, but this is a steam engineering matter. Yes sir; that is why I say I am an expert when it comes to steam matters. I have some knowledge of electrical matters, but you started to ask me technical questions, and I
123 stated I could not, as an electrical expert, answer questions of that kind, but I do have knowledge of electrical matters, as well as steam. I have some knowledge of electrical matters, but I don't profess to be an electrical engineer, so called. No; I don't admit that my knowledge as an engineer would not give me the knowledge to make these several tests of those electric headlights; I didn't qualify as an electrical engineer, and I am not in a position to testify about electricity. No; I don't profess to be an electrical expert. In order to test the electrical fields of this apparatus, and generator and electrical apparatus, would require a man qualified to measure an electric current with the proper instruments, but a man with intelligence can test the light, and a steam engineer can tell whether the statement presenting the steam end is reasonable, or

not. Yes, I could make those tests myself, very well, from my knowledge as a steam engineer, without having any special knowledge of electricity.

R. A. McCRANRY, sworn for the defendant, testified as follows: I am District Superintendent of the Atlantic Coast Line, of the Waycross District, composing lines between Albany, Brunswick, Thomasville, Dupont, High Springs and Monticello, Florida. Yes; I have made some tests a few months ago as to the use of the electric headlight and the oil headlight. I made those tests in Feb-
124 ruary of this year, between Jesup and Waycross. I have here a written report of the tests, that I prepared. Test No. 1. February 2nd, 10:00 p. m. Weather conditions, moonlight, with atmosphere a little hazy. Engine 528 was placed on straight track and man was stationed in front of the engine in center of track at the greatest distance from which he could be seen from the cab of the engine. The distance was then carefully measured, and found to be as follows: with the electric headlight, 412 feet, and with the oil headlight, 330 feet. No; we could not have stopped in 412 feet, if the train had been going at schedule speed. We could see a greater distance beyond the lighted area with the oil light than with the electric light, not on the side, but beyond. We could see 412 feet with the electric light. With the oil light, we could see 330 feet by the rays of the light, and we could see further than that by the moonlight. The next test was No. 2. This test was made at the same time as Test No. 1, and under the same weather conditions. A sheet of black tin, with white figures 3½ inches by 5 inches in size, was placed on a man's back, and he walked from the front of the engine in the center of the track to the greatest distance that the numbers could be read from the cab. After carefully measuring the distance it was found that with the electric headlight the figures could be seen 168 feet, and with the oil headlight 139 feet.
125 Test No. 3 was made at the same time, and under the same conditions as Tests Nos. 1 and 2. A standard caboose car was placed on the track in front of the engine without markers, and engine moved back from the caboose as far as it was possible to plainly see the caboose. The distance was measured, and found to be 635 feet. After testing both lights at the same distance, it was found that there was no perceptible difference, and test was then made without any lights, and it was found that the caboose could be seen as plainly without the lights as with them. We also found that we could see a man 300 feet without the lights. This was on account of the moonlight. Test No. 4, February 4th, 9:00 p. m. Weather conditions, moonlight, with atmosphere a little smoky. Engine 528 equipped with electric headlight was headed south on straight track, and engine 306, equipped with electric headlight, was headed north on parrallel track. Caboose car was then placed 1800 feet in front of engine 528 on parallel track, and there were no lights in caboose or surrounding it; notwithstanding, a bright light of greenish cast, about the size of a switch target, showed plainly where the caboose stood from the cab of engine 306 which was standing alongside of

engine 528. Engine 306 was then backed up toward the caboose, and the light could be plainly seen until the engine was within 570 feet of the caboose, when the light disappeared. This false or imaginary light was caused by the reflection of the headlight of
126 engine 528 on glass window in cupola of caboose, and was very deceptive. Test No. 5. This test was made at the same time as Test No. 4, and under the same conditions. Engine 528 was headed south on straight track, and engine 306 headed north on parallel track, both engines with electric headlights burning brightly. Standard markers, or white lights, were placed on the front of engine 528 and engine 306 moved back until it was impossible to see the white lights. The distance between the two engines was then carefully measured, and found to be 480 feet. The reflection of both headlights shining together shut off entirely the view of all other lights. Test No. 6 was made February 5th, between 8:00 and 10:00 p. m., while riding in the cab of engine 287 on passenger train 57, between Jesup and Waycross. Engine 287 was equipped with the standard electric headlight. Weather conditions, moonlight, with atmosphere somewhat smoky on account of woods being on fire. At no time during this trip, in our judgment, could an object on the track be seen in time to stop before hitting same, while the train was running on schedule time, and in several places where the smoke was thick, it was impossible to see any distance ahead of the engine. On reaching Dean's Still, five miles east of Waycross, we saw a bright light, apparently an oil light, which seemed to be about a quarter of a mile distant, in front of us.
127 None of us knew where the light was located, except the engineer and fireman, who were familiar with the conditions. We found, upon investigation, that the light in question was an electric headlight on 306, which was standing at the passenger station at Waycross, five miles away, ready to take train No. 32 to Tifton. The nearer we approached Waycross, the brighter the light became, and when leaving the river, three miles distant, the light was so bad we could see nothing, and ran this distance in space. We could have seen no object, no matter what size, at any point between the river and Waycross. On approaching Waycross, we discovered that the forearm semaphore home signal, at Brunelle Street, which signal has to be given all trains entering Waycross Yard from Savannah, was eclipsed, and we could not see this signal until we passed under it. We also found in this investigation, that the switch lamps, semaphore signals, etc., when coming in range of the electric headlights of two engines in opposite directions, are eclipsed and cannot be seen. The electric headlights used in making these tests are the standard Pyle electric headlights, with glasses sixteen inches in diameter. The oil headlights used are the standard Dressel headlights, with glasses sixteen inches in diameter. All of the lights were in first class condition during the test. On account of the limited time that we have had to make these tests, and there being no dark, rainy or foggy nights during this time, we
128 have not been able to get very much information, but we will continue the test under different conditions, and furnish

results of same later, on, if so desired. In November of last year, we had a head-on collision on my division, between trains whose engines were equipped with electric headlights. I did not see the two engines hit, but I saw the result. I went to the scene of the accident, and cleared them. The engines were then equipped with Pyle National electric headlights. Passenger train 57 west bound, had stopped at the station at Dupont, to do its work, and extra 925, eastbound freight train, hit it. No. 57 was due there at 10:58, and was on time. The freight train was extra, and had no schedule; on the schedule on which it was running, it should have been there about 10:50. I cleared the wreck, and investigated it. The passenger engine was equipped with an electric headlight, and the freight engine had an oil headlight. Yes sir; I have had experience by actual observation of the effect of electric headlights on signal lights of the kind referred to in this litigation; I have ridden on engines equipped with electric headlights, and I made the test. The colors of the signal change in a bright light, and where there are two lights, the signal disappears, where there are two opposing headlights. Yes sir; the day and night signal disappears. I am familiar with
129 the operation of semaphore signals for handling trains. As to the effect of the electric headlights on them, you can't depend on the color of the light; the bright light will ordinarily show the red light, but under some conditions, the red may be white, and the white yellow. In the same way, the position of the semaphore arm would indicate the switch, but there are hand signals called fusees, which is a danger signal that we throw out. I am familiar with the manner in which the yards of the Atlantic Coast Line are constructed in this State, with reference to the main line. Yes sir; the main line runs through all of their yards. It is impossible to do proper switching without taking the switch engine on the main track. It is not possible to operate an electric light of this kind on a switch engine. Yes sir; we have traveling switch engines, different points for the same engine. We have one engine working at Valdosta and Quitman. It runs on the main line to get from one place to the other. Those engines go at night, if it is necessary. We can't operate a switch engine with electric lights in the yard on account of their brightness; the people working in the yard would be blinded by the bright light, and couldn't see to do their work. The yard people get out of the way when a train with electric light passed. The A. B. & A. tried them on switch engines and abandoned them. Yes sir; the facts stated in the report I
130 have just read from are true, of my own personal knowledge. I made the tests.

I am District Superintendent of the Atlantic Coast Line. I never ran an engine; I have ridden on them. I did not work in the shops at all. I am not a mechanical engineer; I don't claim to be a mechanic at all. I testified from the operating standpoint only. I suppose you might say I belong to the executive department, by courtesy. Yes sir, in test No. 1, we saw the figure of the man a little further on the track with the electric headlight than with

the oil light, I suppose nearly a hundred feet. It has been my observation that where the electric light goes, it is very bright, and beyond it is very dark. I suppose that is the way with all lights. You can see further in the dark with the oil light. I suppose if you don't have any light at all, you can see further in the dark than with a light. I should say that it is peculiar to the electric light that beyond it you can not see as far as with the oil light, on account of the brightness. I have had no experience with acetylene lights. Yes, sir; I simply ascribed it to the brightness. You can't see much beyond the rays of the oil light; you can see buildings for half a dozen telegraph poles where you can see nothing with the electric light. Yes sir; you can see as much as a hundred feet beyond the oil light. I stated a while ago that you could see six telegraph poles further with the oil light than with
131 the electric light. That is 190 feet. You could not distinguish any small object, no object as small as a man. No; you couldn't see a span of track, if it was gone. As to whether you could see any break in the track the distance you could see with the electric headlight, within the rays of the light you could see most anything. In a distance of 420 feet, we could see anything with either light. Yes sir; that is the distance we could see a man or anything on the track. No sir; we could not see anything except trees and houses beyond 330 feet with the oil light. In test No. 2, we used a man with a sheet of tin on his back, with figures six inches long on it, to represent a man or any small object on the track. We could read them by the electric headlight the distance I stated, I think it was 168 feet. Yes, sir; with the oil light we could read them 139 feet. The electric light showed a little further than the oil light. In test No. 3, we placed the caboose in the yard without lights, and moved the engine away from it, to see how far we could see the caboose with the electric light. I think we could see it 635 feet. Yes sir; with the oil light, we could see it for the same distance, but it should be stated that there was a little more moon. With the oil light, we could see the caboose about the same distance. Yes sir; we could see it about the same distance without any lights. It was the moon on the windows we saw. We saw the caboose
132 very nearly as well without the lights as with. As to what particular test, the lights didn't seem to make much difference. Right after testing the lights, the caboose could be seen as plainly without lights as with them. No; the lights didn't cut any figure in the tests. As to whether it was like making the tests in the daylight, I think it was caused by the moon; we could see the outlines of the cab, but not so plainly. It might have been the electric lights in the yard that made it clear, or it might have been the moon. As to whether there were lights around the caboose that brought it in brighter light than the light thrown from the engine, I don't know that the lights did it, but we saw it. Yes sir; our yard is lighted. Yes sir; there were lights in the yard, and it was about one eighth of a mile from the lights. I think the moon caused it most. If the man is behind the light, of course, under certain conditions, he can see further with the electric light than

with the oil light. In an engine backing off from a cab, the man behind the light could see it further with the electric light, under ordinary conditions; if the weather was unfavorable to the electric light, he could see it further with the oil. On that particular night, he might have seen it a little further with the electric light. The man could be seen further. Under other conditions, it might have been different. No; there is no difference between the caboose and the man, except that the caboose is larger. In test No. 4, we
133 had one engine headed north and one headed south, on parallel tracks. No sir; there were no lights in the caboose, or anywhere around it. Three men made the tests, and I dictated the report. Yes sir; all of us did the looking. We found that at 9:00 p. m., engine 528, equipped with an electric headlight, was headed south on straight track, and engine 306 equipped with electric headlight, was headed north on parallel track. Caboose car was then placed 1800 feet in front of engine 528 on parallel track. We were trying to show what effect two lights opposing each other would have on objects between and on classification signals. We found that the green lights on the front of engines under very bright light would look white, or you didn't see them at all, which is very important. We didn't measure the distance we would be off before the color would change, but it was a couple of hundred yards. Then all lights turned to the color of the electric headlight. As to whether it would show whiter in the day time than it would at night, you couldn't see the light in the day time. The electric light would kill the effect of the green light. The electric light makes red look white, blue look green and green white, at all times. It depends on the weather conditions and the moon light, and also on the size of the light, as to how close you have to get to it for it to do that.

We have electric headlights on some engines on our road.
134 Yes sir; we use the same signals for both. We don't change those signals, because they are standard, and we couldn't have one portion different from the others. I don't know what colors we could use. We have very few electric headlights. We don't change them, because they were already on there, and we didn't go to the expense of changing them. I say electric headlights change the colors and deceive the engineers. Yes sir; and notwithstanding this knowledge, we run electric headlights. Under certain conditions, the electric headlights change the color of these signals whenever they pass. I don't know whether it would do it under normal conditions, but it has done it. You can take two trains on a double track, two of these bright lights meet, and if there is a signal point between them, the engineer can't see those targets. That would make a difference with double tracks, if the red arm was out. Yes; we run that way every night, but it is very objectionable. It is that way at Waycross. I know of some accidents caused by electric lights. I don't know of any caused by the oil lights. We have about fifty electric headlights. Yes sir; we run them every night, and use the colored signals, and also use on the same road the oil headlights. Yes sir; wherever we find a night signal on our line, we find a day signal at the same place; if the light is red, the day

signal it put at the danger position. When the board drops,
135 the light goes to white. There is only one arm; the position of the board is what gives the signal. Yes sir; it gives both the day signal and the night signal at the same time. As to whether the engineer will see the day signal, if the arm falls, and the electric light changes the light to a different color, if the engineer sees it at all at night, he doesn't need the light in the signal, because the position of the arm is enough for him. He can see the semaphore further with the electric than with the oil light, under certain conditions. I don't know that it would change the color of the board; the color of the board is unimportant; it is the position of the board that counts; that is, the semaphore alone; of course, the other signals would be different. We have the switch light, and what we term targets on them. Yes sir; I am connected with the same road as Mr. Smith. Some switch lights in the yard don't have targets on them. If the switch is open it is white, and if closed, it is red. There are targets on some. There are no lights in the day time. As to how we signal, they watch the rail, and they have very small tin targets on them. I don't think all have signals on them in the day time; if they have, it is very small. No; I am not clear as to that. At night, we put a switch light there. I have known them to run into open switches with electric lights. Yes; I have know them to do that in the day time, and with oil lights. As to whether it is almost impossible to have a head-on collision, with the electric headlights
136 on two trains approaching each other; it has happened. Yes sir; it has happened with oil lights, and I guess it will keep on. I don't know that it is less liable to happen with the electric headlights. I believe that any kind of light is of very little value to the engineer. A person on the track can seen the electric light a further distance than the oil. As to whether I know that one of those electric headlights will throw a light one mile, I said in my test that one deceived me five miles. As to whether, if there was a wash-out in the track, and he had an electric headlight, he could see it in time to stop, I don't think he could keep out of any kind of trouble if he was running on his schedule. I don't believe he could see anything far enough to stop, if he was running on his regular schedule. If he was running slow, he might stop. Yes sir; one deceived me for five miles. As to whether engineers approaching each other can see the light in the sky, conditions like that very seldom exist. If the train dispatcher made a mistake, and they were going to meet, they could see each other in time to stop if they were on a straight track. Those things very rarely occur. It has happened about a dozen times in my experience, that two trains meet that way. I don't know of a case where the electric headlight prevented a collision. I know where it caused some, if you will let me state them. No; I am not a practical engineer. I have rid-
137 den on trains. I am not testifying as an expert, at all. Yes sir. I am just an employé of the Company, and went to see these test- made. I was telegraph operator and clerk and other things, up to the present time. Yes sir; I know about the practical workings of the classification signals. As to whether I know that those

lights are hard to see with any light, the green lights on the engine are not very bright; the engineer is charged with seeing them. Yes sir; he calls attention to them with his whistle, that is, when there are green lights on his engine; when there are white lights on the engine, he doesn't. No sir; he is not required to stop if his signal is not answered; he is only required to signal. The other engineer must listen and look.

As to the cost of maintaining a terminal at the State line, where the State line is in a river, it would be impossible to maintain a terminal there. At most States, we cross in a stream. Where we cross the Savannah River, there is a long bridge. It is about nineteen miles from Savannah. There is swamp on either side of the river. I think it would be impossible to maintain a terminal at that place. If engines were confined to State lines, and operated only within State lines, that would require a great many more engines. On two of the passenger runs on my district, the engines run into two States. From Thomasville to Monticello is about twenty-four miles, and the State line is about half way. The
138 cost of the best engines used in traffic by the Atlantic Coast Line is $15,000 apiece. If we could establish a terminal at the Florida and Georgia line between Thomasville and Monticello, we would have to have a building there, and men and shops. It would cost about five thousand dollars to get it in shape to make these changes. The cost of maintaining that, in reference to the men, would be, I suppose, five hundred dollars a month.

R. E. Smith, recalled for the defendant, testified as follows:

We never bought any 23-inch headlights, at all. I don't know if any are being used in this country, but my judgment would be, as compared with the 16-inch headlight, the 23-inch headlight ought to cost five or six dollars more.

No, sir; I don't know; I don't know that there is a 23-inch headlight. No, sir ; I do not know that the Central of Georgia uses it. No, sir; I don't know what they cost, except my judgment from what the 16-inch cost. Yes, sir; I have charge of the motive power of my company. We keep coal accounts; we are not keeping individual coal records. No, sir; we don't keep records of any particular engine. We keep it by total coal consumption during the year. I answered yesterday, how much coal a locomotive burns, per horse power on certain roads. No, sir; we have not kept any separate records of the consumption of coal on those engines where
139 we burn the electric headlight or the oil headlight; we never kept any records of that character, to indicate that engines operated with electric headlights were burning more or less than the oil headlights, because the operating conditions would have to be identical, the trains identically the same size, and running over the same track, and at the same speed. I believe some roads do keep the coal consumption by each engine. We abandoned it because the results were not of such a value as to justify the expense and trouble of keeping it. The only way to get the coal consumption of the electric headlight apparatus is to operate it and condense the steam

and weigh the water. That was done in the test I quoted from yesterday. That is the practical way. That is the exact way; and the only way to get at the actual steam used by any steam unit, whether it is a turbine or a reciprocating engine.

O. F. OSTEBY, sworn for the defendant, testified as follows:

I am Sales Manager of the Commercial Acetylene Company. I am President of the International Acetylene Association. Acetylene is a gas that is generated by bringing carbide in contact with water. That gas is used for house lighting, town lighting, lighting automobiles, and locomotive headlights, and any kind of lighting. It has been in use as a commercial factor about sixteen years.
140 It is used very extensively all over the country. It has been adopted in locomotive headlights by the biggest railroad systems in the country, the Harriman system, who are using over a thousand headlights, and it has been adopted by the United States Government for headlights on vessels in the great lakes, where they use headlights. It is used on the D. & S. W., on the New Haven, on the Virginia & Northwestern, on the Illinois Central, on the Southern Pacific, on the Northern Pacific, and probably a great many roads I don't know about. Yes, sir; those are facts within my own personal knowledge. I can't say from personal knowledge how long they have been used as headlights on locomotives, but from information I have, about six years, within my personal knowledge, about five years. The cost of installing an acetylene headlight depends upon the system used. The 1000 on the Harriman System use the generator system; this gas is generated on the locomotive. The Harriman Line are making these generators themselves for about nine dollars apiece, and the headlights cost from about sixteen to eighteen dollars. They use a 16-inch reflector. The generating system of acetylene headlight, the total equipment would be thirty five or forty dollars to put it on the locomotive, and the storage system will cost from 100 to 160 dollars to put on the locomotive, making the difference in cost between the highest acetylene
141 and the cheapest electric headlight, ninety dollars. The storage system consists of a tank in which acetylene has been compressed to about 150 pounds. The tank is packed with asbestos discs saturated with acetone, a sort of wood alcohol, and the gas is in solution. It will hold 1225 cubic feet of acetylene. That is piped to a reducing valve that reduces it to the proper pressure, and then it is piped to the headlight. There are two systems, the generator and the tank. In speaking of the difference in cost between the acetylene and the electric headlight, I had reference to the highest priced acetylene system. I have made numberless tests and observations as to the efficiency of the acetylene headlight. As to the presence or absence in the acetylene light of what is known as the violet ray, I have looked at the colors that go to make the rays of the acetylene light under the spectrum, and the acetylene was very little short of sunlight; it is the nearest approach to sunlight of any artificial light. That is, in reference to all the rays. The electric light has more violet rays than the acetylene. The violet ray has the effect of confusing everything brought before the eye

after it has been exposed to the violet ray. The distance you can see with the acetylene headlight depends on the weather conditions, of course, as it does with any other. It depends upon the size of the headlight, and depends upon the size of the burner used. We have a ¼ foot burner, which gives a little less light than the average oil headlight—a 16-inch reflector headlight. The ⅜ foot burner
142 gives just a little bit more light than the oil light, and the ¾ foot burner gives the greatest light. When I refer to ¼ foot, ⅜ foot, I mean a burner that consumes that much of a cubic foot of the acetylene gas in an hour. From tests we have made with the ¾ foot burner in a reflector 16 inches in diameter and about eight inches in depth, we could pick up twelve telegraph poles, and see them distinctly along the track. With the headlight we have manufactured with a reflector 15 inches deep and 18 inches in diameter, we can pick up a man at eight hundred feet. Yes, sir; I have made tests in that. We made tests in reference to the Missouri headlight law. On November 21st, 1909, we went to Jefferson City, and had two locomotives equipped with Pyle electric headlights of the Missouri Pacific. I saw the test. The tests were made for Governor Hadley, and I was on the engine with him. I saw the colors disappear. We ran against an electric headlight, and we didn't know whether it was 500 feet away, or 5000. The switch lights all looked white. The 60,000 candle power light thrown against the light reflected back. I can't say about what candle power the ordinary switch light is; my estimate is that it is just about two candle power, without the lens. I am not prepared to say how much it is with the lens. No, sir; it is not as much as twenty candle power. That intense light of 60,000 candle power
143 plays on the switch light of small candle power, and changes it- color. Any intense light will. If the acetylene was that bright, it would practically have the same effect as the electric, but not quite, because it is more like sun light. We couldn't tell anything about the switch light. Now, the acetylene light we used was between twelve and fourteen thousand candle power, and didn't have the dazzling effect of the electric light. We could see the signal with that light. Yes, sir; we could tell what it was. The Pyle National Electric Headlight Company, of Chicago, manufactures the electric headlight; and the Anderson Lacey Company, of Texas. As far as I know, they are not doing business outside of Texas. As to the difference in the cost of installing an acetylene headlight, and an electric headlight with a 23-inch reflector, and capable of consuming 300 watts at the arc, the acetylene generating headlight costs about thirty five dollars, applied to the locomotive. The electric headlight costs about $250, to apply it to the locomotive, making the difference $115. The other type of acetylene headlight costs, when one equipment is bought, about $175, to put on the locomotive, making a difference of $75, in favor of the acetylene. When those are bought in quantities, it is not over $125, and that makes the difference between them $125, the difference in favor of the acetylene. The cost of the operation of an acetylene burner or
144 headlight largely depends on the burner and the system used. I am not quite so familiar with the cost of operating the

$35 system as I am with the system called the storage system. I have had five years' experience with acetylene. From figures I have seen, and tests I have helped make, it costs twenty four per cent more to operate the generator system than the storage system. If a ¾ foot burner is operated eight hours, that makes six cubic feet of acetylene. If the railroad is operating its own charging system, they can make the gas at eight dollars per thousand cubic feet. If they buy the gas from the Commercial Acetylene Company, they pay 1½ cents per cubic foot. We will take that figure. A 2 4 foot burner would use six cubic feet of gas in eight hours. That would be nine cents a day, if the light burns eight hours a day. The cleaning of the lights don't amount to much. Of course, there are no carbons to adjust. When the light is wanted, it is simply a matter of turning it on and lighting it, and when you are through, just shut it off, and the gas is there to use the next night. For gas, it would be nine cents per night. The other expenses would depend on the distance of the railroad from the charging plant. One tank would run a light about a month, and then would have to be recharged. It would depend on the distance the tanks would have to be shipped. The average cost of a ¾ foot burner burned
145 eight hours a night on a engine would be about three dollars a month. That includes everything. As to whether that would include freight on the tanks, as I said, it depends on the distance it would have to be shipped. I was referring to one test that was made. If the tank was shipped over the railroad that used it, there would be no freight. We are doing a great deal of that. Yes, sir; it is practicable for a railroad to operate its own system for charging. If it had a charging plant at one end of a division, and a charging plant at the other end of the division, there would then be no necessity of shipping the tank, if the locomotive touched that plant every day. Yes; I said we charged the tank every thirty days; he wouldn't have to come to that point every day. Yes, sir; we have a charging plant in Atlanta. Yes, sir; we have an office in Georgia, in Atlanta. I don't know that I can name off hand all of the Harriman Lines, the Illinois Central, Indiana Southern, Central of Georgia, Oregon Pacific, Southern Pacific, Oregon Short Line, Oregon Railroad & Navigation Company, and railroads running down into Mexico. The Central of Georgia does not use the acetylene light. The difference in the cost of a 16-inch and a 23-inch reflector is about six dollars. The 23-inch costs the more.

I am at the head of an association of manufacturers of acetylene apparatus, and I am employed by the manufacturer of the
146 acetylene headlight. I believe our headlight is the best artificial light on earth; that is why we put this plant here in Georgia. I believe our light is the best in the world, for certain conditions, not under all conditions. No sir; there are no conditions under which the electric headlight is better than ours. Under certain conditions, our light is better than the oil light. Yes, sir; taking the conditions all in all, our acetylene light is much better than the oil light. The Atlantic Coast Line Railroad does not use the acetylene headlights on its engines. This law is the reason we have never approached the Atlantic Coast Line on this question.

Yes sir; the Atlantic Coast Line Company uses the oil lights and the electric headlights. There are no railroads in Georgia using the acetylene headlight. Yes; he established a plant here for the purpose of educating them to it; before this law came up. No, we have not abandoned this light. Yes, it would be very beneficial to our company for the court to declare this law unconstitutional. The electric headlights are made by the Pyle National Electric Headlight Company. The Western Electric Company makes them for electric cars. The General Electric Company makes the same line of headlights. Yes sir; the Harriman System runs into Texas. They use the electric headlight in Texas, because of the law. I said the Harriman System used one thousand acetylene headlights; they
147 have more engines than that. No; they have not used them on all engines, because they pass through States with headlight laws like this one. Yes; they use the electric headlight in Texas. The Sunset Limited, that runs from New Orleans up the Coast, I think the locomotives on that train use the electric headlight. It runs half way across the continent. Yes; the Central of Georgia is a part of the Harriman System, and uses the electric headlight. It is difficult for me to say what other State in which the Harriman System runs requires the electric headlight. I have seen electric headlights in almost every State in which the Harriman System operates, and seen the acetylene headlights there, too. Yes; they use both in some States. No; I did not mean that three dollars per month is the cost of the actual gas consumed; that is the entire cost of maintaining the headlight. I don't remember what the gas cost in that particular test. I am trying to sell these things; I can't do it in Georgia now. We are able to tell the railroads they will use from ¼ foot per hour to ¾ foot per hour. How much that costs per month depends on the running hours. I said eight hours a night; that is six cubic feet per night. With acetylene gas at $10.00 per thousand, that would be six cents per night; with acetylene at $15.00 per thousand feet, it is nine cents. Yes; it would cost the railroads something to set
up their own generating plant. No sir; they wouldn't have to
148 have them all along the line. The New York & New Haven have been operating the acetylene lights six years, and are handling all cars from their own plant. It cost them twelve thousand dollars to set up their own plant. The El Paso & Central's cost them four thousand dollars. Yes sir; the acetylene gas is stored in a tank, and fastened on the engine in any convenient place, usually under the running board. The gas is piped from the tank to the burner. Yes sir; when that tank is used, you have to fill it. Yes sir; they ship it to our Company's generating plant, or some other company, or the railroad would have to have one. A headlight wouldn't be a headlight without a reflector. Yes, we have a reflector. No; we don't have a globe around our light. Yes; we have a glass front. Yes; the glass front of the reflector has to be polished like any other reflector, but not as much. Our light is the cleanest light. The effect that the breaking of the glass in front of the headlight would have on our light, would depend on the rate of speed the locomotive was traveling. If it was traveling forty miles an hour, with

the glass out, it would probably put out the light, but there is very little heat produced by the little flame, and the breaking of the glass in the headlight is not due to that, or from the difference in temperature in the headlight and outside. Yes; both headlights produce some heat. The electric arc light produces a great
149 deal more. I didn't make the statement that our light is better in every way, under all conditions. I did say that there was no condition in which the electric headlight was better than ours. Yes, I know of roads in Georgia trying the acetylene lights. No sir; they did not continue them in use, largely on account of this law. As to whether I know some that tried it before this law went into effect, and abandoned it, our plant has been here three years; two years, we have been up against this headlight agitation. Yes sir; it was before we came to Georgia. I am not aware that some of the railroads in Georgia tried the acetylene headlights more than two years ago, and abandoned them. I can't say it is not true, but I don't know it. There have been a great many explosions of acetylene gas throughout the country. There never has been an explosion of the acetylene apparatus of our company on a locomotive. No sir; I have never heard of any. Yes, it is easy to explode, like any other gas. Yes sir; it is subject to leakage; the pipes have to be tight. If the pipes got out of order, and the gas escaped, it would be repaired where the engineer was; he could probably make the joint tight by solderning it up. If the gas escaped, and the light was extinguished, there would be no way for the engineer to generate the gas and fill the tank. Yes sir; his headlight would be useless, but I have never seen those things happen. No sir; I am not an engineer. No sir; I have never worked in any
150 shop of any kind. No sir; I am not testifying as an expert on electricity.

Defendant closes.

F. F. STARR, sworn for the State, testified as follows:

I live on Telfair Street, Augusta, Georgia. I am a locomotive engineer. I have been running twenty one years on the Central of Georgia. Yes sir; I am running on the Central of Georgia now. I run a Baldwin locomotive. I run a mixed passenger and freight train between Augusta and Millen. I have a Pyle electric headlight. I have been using it eleven years, not this particular headlight. All the locomotives of the Central of Georgia Railway in main line service, both freight and passenger, have the electric headlight. Yes sir; I have made a test as to how far you can see with the electric headlight, in running a locomotive, just from my own observation. On a straight track, you can see twelve or fourteen telegraph poles. That would be a little over five hundred yards. I have used the oil headlight. With the oil headlight, you might see two hundred feet. Also, there are several advantages in the electric light; you have lights inside the cab, obtained from
151 the same power as the headlight; then, the distance you can see. The electric headlight never had any effect on my eyes; I think mine are better, if anything; that is my opinion. I don't

have any trouble at all in keeping up my electric headlight. I have had a little repairing. I have had one bushing in eighteen months. A bushing is the bearing that holds the shaft. I couldn't say what expense that is. It is made of brass. It weighs in the neighborhood of a pound. There hasn't been any other expense to the railroad for repairs. It only requires an ordinary mechanic to put that bushing in. The Central of Georgia Railroad does not have to have any expert electricians to look after these headlights, in Augusta, or at any other place, that I know of. As a general thing, the engineers look after their own lights. To keep them running, you have to renew the carbon. They burn one nine hours. Yes sir; it just burns one carbon; the other is a copper. With proper care, that will last from thirty to sixty days. No sir; I don't know what is costs. The carbons cost about three quarters of a cent apiece. There is a little expense attached to cleaning the reflector, a box of polish once a week; that cost twenty five cents, but one box will clean five or six. Then you have to have waste. Yes sir; you have to do that with any other light. Certainly, the electric
light I use will burn with the gas broken. No; it has no
152 effect on the light. The glass is put there to protect the light
from the weather. During my experience, my electric headlight has gotten out of order on the road once or twice, in the twenty one years I have been running. The last time, I had to run for twenty miles, to the first water tank. One of the valves was stuck. Yes sir; I had similar troubles with oil lights when I used them. The greatest trouble with the oil was, very often it catches on fire, or won't burn at all. Yes sir; if my electric light gets out of order, I can put an oil light in place of it. I have had more trouble with the oil lights than with the electric lights. I never noticed that the headlight changed the color of the signal glass. Yes; we run by those signals. I have not seen it change them. No; it would not change a green light to white, or one from red to white. No; I have never noticed an instance like that, in my entire experience in running the electric headlight. We use the standard semaphore signals; that is an arm pointing out from a post, and it is also connected with the night signal, which is a light. I think the Atlantic Coast Line uses the standard signals, but the semaphore has only one arm. If you don't see the signal move, you stop. You can see the movement of that semaphore further with the electric headlight than with the oil, three or four times the distance you can with the oil. The semaphore shows with a day signal and a night signal. I never
noticed whether at night the electric rays falling on that sema-
153 phore light would change the color from red to white. No sir;
it does not do it. In reference to switch lights, we have a light, and then an arm. Yes sir; the arm is for the day signal; one side is red and the other white. You can see those arms further with the electric light than with the oil light. No sir; I never noticed the electric rays change any signal, either the light or the target. No sir; the electric light does not change the red light which is at the switch signal. Yes sir; we have both a day signal and a night signal at the switch. Yes sir; the electric light shows us both.

As to whether the electric light will show you a break in the track, or a break in a switch, it depends on what size it was. You can see it three or four times further with the electric light than with the oil light. As to the effect of a headlight approaching you, a man can't run in the face of a headlight; a headlight burning is a danger signal. As to the reflection on the sky, I have seen it ten miles. Yes sir; it let me know an engine was approaching. No sir; there is no danger of two trains approaching being blinded by the bright lights and having a wreck. I don't see how that could happen. The front of the engine carries green and white signal lights. Yes sir; it carries green and white flags, in addition to them. Yes sir; it carries them day and night. You can see those signals further with the electric light than with the oil light.

154 Yes sir; if I saw a locomotive on the track, that would be a signal to stop. There are only short pieces of double track in Georgia. I don't know what the Atlantic Coast Line is. I run a train in the day time, as well as at night; half of my work is in the day time; I come from Millen to Augusta in the day time. Yes sir; I know something about the consumption of coal, in reference to the electric headlight. If there is any difference in the consumption of coal in running in the day time and at night, I have never been able to detect it. These electric headlights do not take any motive power from the engine, because there is such a small quantity of steam used, that it is not appreciable. When my train is standing still, the steam is stored in the boiler. The steam that is used in making electricity would go off in vapor, if it was escaping. A locomotive has a little excess steam. I can't tell you how much coal my engine burns to the car mile. Last month, I made twenty two actual miles with a ton of coal. I couldn't tell you how long it took me to run that twenty two miles; it is a mixed train, and the schedule is about twenty-three miles an hour. I can't say how much coal costs. If the electric headlight has any effect in making an engineer color-blind, I have never heard of it. On a dark night, the electric light penetrates the darkness further than the oil light. In a fog, the electric light will fall short of a perceptible distance from the train. Sometimes, you can't see at

155 all. In a fog, you can't see at all with the oil light; sometimes you have to go around to the front of the engine, to see if it is burning. No sir; it throws no rays at all. Yes sir; if you are running an engine, it is practically running without any headlight; you can't depend upon that; it is just like shining a light against a white washed fence. Yes sir; the practical result of the electric headlight in giving notice to persons on the track, is that they can see it further, and be put on notice. The electric light is the safest, in regard to the safety of the engineer and passengers. I can give several accidents in my experience, that I know the electric headlight has prevented. One night, I came upon two cows laying on the track; there had been hard rains, and they came upon the track to lay down, because it was higher. I was running about twenty or twenty five miles an hour, and stopped in plenty of time to get them off. The fireman had to go out and drive them

off. No sir; I could not have seen them in time with the oil light. If I had struck those two cows, I would have rune over them. Very likely, it would have derailed the train. Another night, I came on a mule, and would have run him in the trestle, or run over him, if I hadn't had the electric —, and the fireman had to go out and run him off. No sir; I could not have seen him with the oil light.

156 I stopped for a tree one night across the track; of course, I would have gone into the tree if I had not had the electric light; but I was running slow, and had plenty of time to stop. On another night, I ran up to a station, and saw a negro come out of the depot. I never would have noticed it with the oil light, but I saw a small crack in the door, and saw that the depot was being broken into, but he didn't have time to do it. No sir; you cannot see an obstruction on the track in time to stop, with an oil light, when you are running forty miles an hour. My usual speed is twenty miles or a little over. Passenger trains run between thirty or forty. No sir; you can't stop a train at that speed with an oil light, in time. Under ordinary conditions, you can, with the electric light. I don't know of any head-end collisions that the electric headlight has prevented. With two trains approaching each other on the same track, and both running electric headlights, it would be almost impossible to have a collision, if they kept the rules. A headlight is a danger signal, and the engineer must stop. Yes sir; the reflection of the light would give you notice; you can see it for miles. No sir; the oil light would not. Yes sir; a fusee is a signal. No sir; I never noticed the electric headlight change the color of a fusee. The fusee is green and red. Yes

157 sir; it stays the same color. I have not noticed any effect on the watch from the electric headlight. As to whether you can judge the distance of the electric headlight, standing on the track and looking at it coming, it is pretty hard to tell how far it is coming, but if a person ahead of the engine, on the track, will hold his eye down to the rail, he can tell where it is at. No sir; it is no trouble for the engineer himself to measure the distance.

W. K. KLINE, sworn for the State, testified as follows:

I am a locomotive engineer; I have been since 1898. I have run on the Fourth Division of the Central of Georgia. That includes this branch. Yes sir; my entire experience has been with the Central of Georgia. Yes sir; I worked in the shop before I became an engineer. I didn't complete the usual course of an apprentice; I served three years at it. I have been operating a locomotive with an electric headlight ever since, eight years, I think. The size of the reflectors varies from eighteen to twenty inches. Yes sir; you can put an eighteen or sixteen inch reflector into the case made for a 23-inch reflector. It is very simple. You can use the same arrangement as putting an oil light in the electric case. The case rests on a stand, and the reflector is bolted in behind with a screw, and that slides right into the case. Yes sir; you can take a small one

158 out, and put it into a larger case. That can be done rapidly, if the preparations were made beforehand; it could be done in five minutes. It could be done when the train was moving,

but I wouldn't consider it a safe proposition. No sir; in running from one State into another, as into South Carolina, requiring a smaller reflector than Georgia, it would not be necessary to establish any terminal at the State line to make that change. No sir; there would be no necessity to make any change in the generating apparatus. It would not be necessary to change the deflector, if they equipped all with 23-inch reflectors, because the other States require a smaller reflector, and they could use a larger one there all right. No; it isn't necessary to cut a hole for the big cat and the little cat, too; the little cat could go through the big cat's place. I did not have to take any special course, in order to be able to keep my electric generating apparatus in order, except the book of instructions the Company furnishes. They instruct the engineers how to operate the electric headlight, just about the same instructions they give them on other matters, only the books of instructions, and things like that. I have not experiend any difficulty in keeping the light in order. As to how often they have to be repaired, they put in a new bushing about every two years. I don't know the actual cost of that, but it is not much. Yes sir; the bushing is the bearing; it is the
159 standard bushing they use. I don't come in contact with the bushing; that is done in the shop. No sir; there are no other parts of the machinery that get out of order often. We burn about one carbon in eight hours. The bottom carbon last indefinitely. That is made out of copper. I have been told by our electrician that the carbon costs about seven or eight cents. There is no expense in keeping the reflector polished up. I have an electric headlight, and I usually polish my own. I use a piece of cotton or old rag, and it don't take but a few minutes. The cost of it is nothing at all. Yes sir; you would have to use a little kerosene and lamp black, which I use in polishing my reflector, to polish any reflector. As to the cost of lamp black, there is a great deal of it used; they use it for other purposes, and I don't know what it costs. I don't know what has been the cost of repairs on my electric apparatus, to keep up the headlight; it has been so little, I don't think any one figured on it—nothing except the bushing put in. I usually do the trimming up myself, it is very simple. As to the consumption of coal, my technical knowledge is limited, but I can give you a practical idea. Yes sir; I run my engine day and night. No sir; I do not notice any appreciable difference in the consumption of coal when I am burning the electric lights and when I am not burning them. As to what it actually costs to run an electric headlight, I can give you this as an illustration. My engine is fired up,
160 and I get a pressure of 200 pounds, and two hours before leaving I may turn on that headlight. There is no draft on the fire from the electric headlight. The exhaust from the headlight doesn't go through the front, and doesn't create any draft on the fire, and just waste steam is around the engine would run the headlight. I have known my headlight to run one hour, and never show any difference in the water or steam. I have made the test just as a matter of observation, just in ordinary practice. The steam gets from the boiler of the engine to the turbine wheel through a

pipe. I don't know exactly what the size of the pipe is. Yes sir; that is a quadruple arrangement; the steam is used four times. Yes sir; after it gets going, it reduces the steam used about fifty per cent. I am not positive whether those pipes to the boiler are over 3/8 of an inch, or not; you couldn't tell exactly in ordinary practice, at all. No sir; it is not correct, as testified by Mr. Smith on yesterday, that it would cost between $250 and $400 to run one of these electric headlights a year. Yes sir; I heard his testimony, in which he said the main part of the cost would be the coal. No; it would not be possible for it to use $250 worth of coal a year. I seriously doubt if it would use twenty dollars' worth. As to whether or not, in the running of an engine, there are times when the steam, if it is not used, will have to escape, the most wasteful method I know
161 of is through the pop valve. Frequently it pops off when it should not. If you are pulling a heavy grade, and shut the engine off, and you have got your engine full of water, and when you get above 250 pounds pressure, you have got to relieve it, and that goes through the pop valve. Some of it might go through the headlight and leaking valves. There is enough waste steam to operate one headlight. It is a mighty hard thing to get at, how much time is actually used in running, and how much in stoppage, in running a train. I run a through freight; my schedule is about nine or ten hours. As to what per cent of the time I am working steam, on the road I run on possibly fifty per cent. By working steam, I mean delivering steam into the cylinders. Yes sir; when I am not working steam, the engine is still, if I am not drifting. No sir; I have no use for steam in that time. I think the greatest percentage of the steam I am not using in running the electric headlight would go off in vapor if I didn't have it. No sir; I never noticed that the fact that I had the electric headlight affected the motive power of my train. No sir; I never had to shut off the electric headlight in order to help me with the power, and I never heard of any engineer having to. No sir; the electric headlight does not use a sufficient amount of steam to affect the power of the engine. Our schedule is from 9.15 to 12.35, between Columbus, Georgia and Bir-
162 mingham, Alabama. I run a freight train. The consumption of coal for that run is figured on the tonnage you haul. It takes from twenty to twenty two tons to make the round trip, with a tonnage train. My engine is a 22-inch engine, and carries 200 pounds of steam. I couldn't figure whether it is as much as 500 horse power; I don't know the tractive force. I have run on an engine on which an oil headlight was used. As to whether I know anything about acetylene gas, we tried it out, and rejected it. It was just a little better than the oil, and they had an explosion in one, and I think that was the reason they rejected it. They tried it on a switch engine on our division, and they used the acetylene light, and my recollection is that it was very unsatisfactory. I observed the light, and found it just a shade better than the oil light. I reckon the electric headlight is a better light than the oil headlight. Yes. I know it is. There is no comparison between the electric headlight and the oil headlight. Yes sir; the electric headlight will burn

with the front glass out. No sir; the oil light will not do so. My reason for saying that the electric light is better than the oil light, is that it lends an additional degree of safety to the trains; it not only protects my life, but the people who are on the trains, and the property of the company. It makes the engineer's eyes last
163 longer. We have what is called an eyestrain from looking into the darkness. It gives us an opportunity to be in the service that much longer, and we can work for our families that much longer. Yes sir; we get eye strain in our efforts to see ahead with a poor light; with the electric headlight, everything is just like daylight. As to the electric light making men color blind, color blind men can't work for railroad companies. No; I never knew any man to have that caused by the electric headlight; he was color blind before. I know that it benefits; rather than injures. No sir; the electric light does not have a blinding effect on the engineer that is driving the train. It makes the signals along the track that much plainer. No sir; it does not change a green or red light to a white light. As to the testimony of Mr. Smith and Mr. McCraney, I would like to say that if the electric light makes a red light look white, he is color blind, and ought not to work for a railroad. No sir; it has never made any changes in the signals in my eyes. My eyes were examined the other day by the company's oculist, and pronounced perfect. As to how far I can see on a track with the electric headlight, I might possibly see a big washout half a mile away, on a straight track. As to whether there is any advantage of a 23-inch reflector over a smaller reflector, it gives you a wider range of vision. An eighteen or sixteen inch reflector has a tendency to concentrate the rays more between the rails; with a 23-inch reflector, it
164 gives you a wider range of vision, and you could see anything approaching the track, when, with the rays more concentrated, you might not. You might observe such a thing as a tree that had fallen too near the track. As to the brightness of the light that is thrown on the track, and what you can see, the nearest I can get to that is that it almost converts darkness into day. It is just as much as your street light is. You can see a rabbit running along the track just about as far as you could see with your eye. In approaching a station, you can read the mile boards and the station boards possibly a couple of blocks, just about as far as you can see in the day time. I couldn't say positively the number of feet, on a straight track, that you could read figures six inches in size; I might approximate it, and miss it; you can see it as far as you can in the day time, with a good reflector. Yes sir; the reflector on the electric light operates like a search light, and it practically eliminates the possibility of head-end collisions at night. If one engineer overlooks his orders, and runs on, or two trains are coming together on the same track, if they are equipped with the electric headlights, I don't see how it is possible to have a head-end collision. Yes; I know of a head-end collision that was prevented by the electric headlight. I was running an engine on a certain occasion, I can't remember the date, and the engineer had been on duty such a number of
165 hours that he forgot I was in existence, and I met him on the main line, and if it hadn't been for the fact that both engines

were equipped with electric lights, we would have hit. He was running at a hill, and I was running down a hill. We wouldn't be here if we had had the oil headlights. No sir; I wouldn't be here to testify. You couldn't see much better with the acetylene than with the oil. I don't know much about them. I know of some other cases where collisions were prevented by the electric headlights, but I don't feel like telling all these things. We don't want to come out and tell it when some fellow overlooks his orders, or for some reason, he failed to carry out his orders. If an engineer overlooks his orders, and fails to carry them out, and an engineer is using the same track and coming in the opposite direction, it would not be possible for them to have a head-end collision, if both had electric headlights, if both were looking ahead. Yes sir; it is their duty to look ahead, and they are generally looking ahead. Yes sir; I know something about the distance an engineer can see an engine or car with the electric headlight in the dark. I was on fast train 37 coming out of Columbus, and I was going down hill, and just before you get to the hill there is a dip, and it is down grade just enough for a car to roll out on the main line. They were doing some
166 switching there, and for some reason this car got out on the main line. No. 37 meets No. 4 at Sylacauga, and when I turned the curve going into Sylacauga, I saw this box car, and stopped in time. I would have hit that car hard. My having the electric headlight, this collision was prevented. As to what would have been the effect on my train if I had run into that car; I had a very heavy engine; it might have possibly damaged my engine, but the greatest danger was that I might have knocked it into No. 4, that I was to meet there. As an expert and an engineer, I consider the electric headlight the greatest safety appliance in existence, except the air brake and the automatic coupler. There is no telling the numbers of lives it saves. There are many things that are avoided with the electric headlight. On a dark night, or a night in which the atmosphere is heavy, the electric light would have a penetrating effect; it would penetrate the mist and rain, and you could see ahead of you. If you didn't have one, you couldn't see your hand before you. The electric light, on such a night, gives you the advantage of seeing ahead of you; it is a great deal safer than the oil light, where you couldn't see ahead. Sometimes it is hard to tell the oil light is burning, unless you go in front of the engine, and look to see. I have never noticed the electric rays being thrown back on a rainy night, at all. An engine carries signals if it is running extra, and if a train is following, it carries signals.
167 The signals on the front of the engine are the classification signals, either white or green. The electric headlight makes these colors more distinct. Yes sir; the engines carry day signals, if they are running extra, or if there is a train following; they carry a light at night, and a flag in the day. If two engines were approaching, and the engineers saw those day signals, they both wouldn't try to occupy the same track at the same time. If two engineers are coming in opposite directions on the same track, they must stop; a headlight on the track is a danger signal. Yes sir; if they are

approaching in that way, they can see further with the electric headlight than with the oil headlight. If the engineer was carrying signals, the rules require him to blow signals; that is, trains of the same class; trains of a superior class don't have to. If Mr. McCraney says they don't have to blow signals, his are different rules. The standard rules require engineers to blow and answer. No sir; I have not read over the rules of the Atlantic Coast Line. The oil headlight is more difficult to keep in repair than the electric headlight; it is up on the front of the engine, where there is a great deal of heat. Sometimes it gets so hot they burn up and smoke up, and are in bad condition. A great deal of that is on account of the location. The chimneys break very often. If the glass in front breaks, the light goes out. If you are running the electric headlight, and the
168 apparatus were to get out of order, so you couldn't fix it, you could change the electric headlight to an oil headlight in five minutes, by taking out the electric headlight and reflector, and slip the oil headlight and reflector in, and go on. I have done it myself in five minutes. Yes sir; if we were running from Georgia into North Carolina, and North Carolina required the oil light, we could easily have the oil light so we could comply with the two laws. No sir; you wouldn't have to have a plant at the State line. There are other reasons why I think this appliance is a safety appliance, other than the facts I have already given. A man might place a post or tree on the track for wrecking the train, and if you had the oil light, you couldn't see it in time. With the electric headlight, it is very probable the accident could be avoided. We frequently find washed up track, and save severe accidents by discovering them with the use of the electric light that would not be discovered with the use of the oil headlight. The electric light makes the color of a red fusee look redder, and a green one look greener.

It has been several years ago that the acetylene lamps were used, of which I spoke; they experimented with it on a switch engine; I think it was engine 1137. I think it was four or five years ago. The company sent a man there to put it up. I don't know
169 whether there have been any changes or improvements in the patents since then, or not; there may have been a great many. Yes, sir; the electric light makes the signal lights plainer; the headlight casts such brightness on them that it helps you, instead of hurting you. I don't know whether that is different from the general operation of other lights, but I know it will make them plainer. Yes; I believe if you put a candle out there in the street, you could see it further and clearer in the night than you could in the day time. As to whether, if the electric light is like day, the effect of the electric light is to kill the candle light that is in it, that don't make it true, because the light you get in the day is natural, and the other is artificial. Yes, sir; it is a light, but it is not produced like the other. Yes, sir; if you strike a light in a large room in the dark, you can see it very clearly. As to whether, if you light this room with the electric lights, and then strike a match in it, you can see it as well as in the dark, the match would be just as bright, but my gaze wouldn't be concentrated on that light in a lighted

room like it would be in the dark. I would naturally look towards that light if the room was dark, but if it was bright, I wouldn't look at it. That is an optical illusion, when you strike the match in the day time, or in a lighted hall. Yes, sir; if you take a red lantern in the dark at night, you can see that within your range of
170 vision; it will appear bright in the night time. No, sir; that would not appear as bright in the day time as it does at night, because you can't compare day light with darkness. Yes, sir; by turning a powerful electric headlight on it, you see it better, and at a greater distance. I don't know how far I can see an ordinary railroad signal without the aid of the electric headlight, on the side of the track, but I can see it further with the electric light. The distance at which I can see a railroad signal without the electric headlight would all be due to the condition of the atmosphere and the condition of the signal, and therefore I prefer not to approximate it unless I could actually measure it. I might err in my judgment. I have used the electric light so long to see signals, I would be afraid to approximate it. I would have to go several years back, and I might make a mistake. You can see a white light about the same distance you can see a red light of the same size. I don't know that I would see an oil headlight down a straight track, coming towards me, two or three miles; I couldn't tell what it was. Yes, sir; you can see a red light as far as you can see a white one, that is a lantern. I don't know about a red light being weaker than a white one, about the effect of the colored glass being to cut off all the rays except the red rays; I know when I see a red light, I
171 stop, and it must have some strength. For the past eight years, I have been running behind an electric headlight, and it brightens all in my vision. I can't go into all these things that don't apply to the electric headlight, and I know the advantage of the electric headlight over the oil. I am running now on a regular through freight train. There is a double track for about two miles, between McCombes and Birmingham. As to cutting off your headlight when meeting a train, if you go on a side track, you shut off your headlight until he passes you, because it indicates that the track is clear, and it is safe to proceed. No; the reason of that rule is not that it blinds the man approaching you; it was put in effect before we ever used the electric headlights.

There are no double track roads in Georgia, that I know of, to amount to anything; there are some short pieces, sidings, and going into cities. The Atlantic Coast Line is not double tracked that I know of. Yes, sir; where we have a night signal, we also have a day signal, a flag in the day, and a light at night. We use semaphores. Yes, sir; both signals are put on at the same time at night. Yes, sir; the rays of the electric light are concentrated down the track, and are thrown on all the objects that come within the line of its rays. Yes, sir; you can see an object, whether it is a burning light or not a light, further at night than in the day time, because the rays fall on them, and see the color of it. Yes, sir; if
172 your light is out, you could not still see the lantern; if the light were to go out, he would have to wave you down with a lamp. Those lanterns have red globes; the hand light has a red globe, and

has two colors; it shows white, and when the arm is changed, it turns to red. The engineer must see the board and the light; he must see the board drop, and the white light disappear. Yes, sir; the electric light turns the track into daylight, and you can see the signal if the light was to go out, at a far enough distance to stop the train.

If an engineer equipped with a headlight with a 16-inch reflector came to a State line, the laws of which required a 23-inch reflector, with the case sized in the proper manner, and the equipment prepared, the engineer ought to make that change in about five minutes. I reckon it would be the engineer's duty to do that. I think the engineer would do it, if he was requested to do it. As to whether that is in his line of duty, nothing like that has occurred. As to whether I think the engineers would make that change, I would, if they asked me, if they put it in the proper condition. I would do it as a part of my duty, but I might ask them to pay me for it. I don't hardly consider that it is enough to go after them for. I think it could be done inside of five minutes, if it was properly adjusted, and all parts ready to make the change. No; that wouldn't require much preparation. If an engineer with an engine
173 equipped with an oil headlight should come to the State line where the laws required the installation of an electric headlight, that change, from oil to electric, could be made even a little quicker. No; you wouldn't have to put on the turbine; you have the dynamo there. I understood you to say reflectors. That equipment is entirely different. Yes, sir; if an engine simply had an oil headlight, and came to the line of a State that required an electric headlight, you would have to abandon that engine, or equip it with a turbine and generator, if they ever let it get to the State line and run across. He ought not to let it get there, if he is going to comply with the State law. No; a man running an engine properly equipped with an oil light under the laws of South Carolina, when he reaches the line of Georgia, which requires an electric headlight, has not got to abandon that engine or take a great deal of trouble and time to equip it with a turbine and electric headlight; he can do all that beforehand, and be prepared. No; that wouldn't cost a great deal of money. Our road has put them on all engines. I don't know how much it cost them. If the law in one State is that they have electric headlights, and they had to have oil headlights in the other State, they would have to have that engine equipped under the laws of one State, and to come up to the laws of the other State, they would have to have another equipment on it.
174 Yes, sir; when you once put on the electrical apparatus, it is a permanent thing. Yes, sir; you can put it on at the shop. Yes, sir; you can change from an electric to an oil light by putting the oil light inside the case. You don't have to take off the electric apparatus. Yes, sir; it is a permanent thing, and can be made adjustable to carry the oil light or the electric light. Yes, sir; I meant that you could carry a sixteen or eighteen inch reflector, and change it to a 23-inch reflector, if you make the case large enough. It all depends on the case; you can have a case big enough for the 23-inch reflector, and you could put a 16-inch reflector in it.

Yes, sir; you can fix the case to carry any size reflector. The Central of Georgia runs through Alabama, Georgia and Tennessee.

With a case that is big enough for a 23-inch reflector, we can take out the 23-inch reflector, and put in one sixteen inches. If you have a 16-inch reflector, you can't put in a 23-inch reflector, unless it is big enough to carry it. Some roads have 16-inch reflectors in cases that can carry 23-inch ones. It would depend on the case.

Yes; it is practicable to make them large enough for the 23-inch reflectors. Yes, sir; they are made large enough. Just by turning a screw, you can easily change the reflectors without changing anything else about the electric apparatus.

175 J. T. FICKLING, sworn for the State, testified as follows:

I am a locomotive engineer on the Southwestern Division of the Central Railroad. I have been an engineer twenty seven years. I served as an apprentice in the shops. My present run is between Macon and Columbus. I run a passenger train. I have a Pyle electric headlight. I have been running with an electric headlight about ten years. I consider it the best light I ever used. I have used three kinds. It is to see any object on the track, and for others to see; it is a safety appliance. You can see further ahead of you when you are running an engine with the electric headlight, than with any other, about one eighth of a mile further. I ran an engine that carried an oil light a long time. The Central of Georgia has adopted the use of the electric headlight. The Central used the acetylene light for a while. It was not satisfactory. It was about seven years ago. It was scarcely better than the oil light, and we had a great deal of trouble with the generator. We generated our own gas, and we would have a great deal of trouble in generating the gas. Sometimes the flow of water would be too great, caused possibly by the construction of the apparatus. I couldn't say it was just like these are today. It would flood the generator, and put the light out, or sometimes, if you had lighted it, it would go out. On

176 one occasion, at the round-house at Columbus, the round-house boy wanted to see what it was, and fooling around it one night, he took a nut loose, and it exploded, but of course, I don't say it would have exploded from other causes, but he went too near it with a light when he took the nut off the generator. Yes, sir; we use a torch all around the round-house, oiling and looking over the engines. Yes, sir; if that acetylene escaped, there would be danger. The electric headlight is a safety appliance, and is superior to the others, because you can see so much further with it and you can see it in the sky. You can see this light when you can't see the train. I have seen it for miles on a curved road. I never have seen that with the oil light. We never had but the one acetylene light; that was a sort of experiment. There should not be any probability of a head-end collision between two trains approaching on a straight track, and both burning electric headlights, because the rules requires when you see a headlight burning, you must bring your train so that you can stop, because you know that is a danger signal, just as much a danger signal as any other. As to the danger of the engineers being blinded by the light striking them in the

eyes, in two engines approaching. I have never experienced it. It is the same thing as looking at the sun; it is there to blind you, but if you shade your eyes a little, you can see it. Yes, sir; you can see the rays far enough to know it is coming toward you; you
177 can see it for miles. We have two electric lights in the cab. That is an advantage; it gives light on the steam and air gauges. They also have a light over the engineer's side that we turn on at night, to look over the orders. We can turn on this little light, and read the orders. Certainly, that is an advantage over the old way. We had nothing but a little oil light for the water and steam gauges. The engineers have to look at their orders sometimes when running; sometimes they refresh their memory when they have a great many orders. Neither light is any good through a fog or heavy rain, because the mist settles on the glass in front of the headlight, and that obscures the vision. I never heard of any light shining through a fog. The electric light might be a little better than the oil light, because it is stronger, but neither one *are* much good. The one I had wasn't much good in a fog; it wouldn't penetrate it far. No; the oil light wouldn't do it, either. The experience I have had with acetylene and electric and oil lights is that they wouldn't give you any light in a fog that will be sufficient to stop in the event you saw any obstruction on the track. You can only see a very short distance through a fog with the electric light. I had one experience; I had a little head-end collision in the yard in Macon. On the 14th of November last year, a switch was left open. Smoke had settled in the yard, and I was within fifty feet of the switch when
178 I saw the switch, and I have a very good light. I was within fifty feet when I saw the light, so I was compelled to hit it. As to how far electric rays will go through a fog, I couldn't see but fifty feet. The oil light wouldn't throw its rays any better. No; it wouldn't be as good; the glass becomes obscured by the fog. No, sir; it is not occasioned by the kind of light. I have never experienced any difficulty of the electric headlight changing the color of signals. It does not change it; if it did, it would have changed it some time in my experience of ten years. As to its effect on the engineer's eyes, I don't know that mine are any worse than they were before. I can see as far as anybody. The electric light has had no effect whatever in making me color blind. As to the repairs I have had in keeping my electric apparatus in order, possibly in eighteen months or two years, we have to have new bushings put in; it is the only thing that wears out. The shaft naturally wears, and the bushing. There is a very small cost to replace the bushing. We use one carbon a night. I don't use a whole carbon on my run. I leave Macon at 2:45 in the morning, and I put it out when it becomes daylight. A carbon will last me two or three nights. The average engineer would burn up a carbon in eight hours if the front glass to the headlight was in place. If it is out, the wind will burn up the carbon fast. We have an electrode, which is the bottom carbon. It is a piece of copper about three inches long. That with care,
179 will last a long time. If you run the light over 1800 revolutions a minute, the color of the light will change, and you will get a green light, and you know what is the matter, and you

just reach up and reduce the steam pressure on the turbine wheel. It only takes an expert electrician to keep those machines in repair, when it has to have a general overhauling. When it is completely worn out, it naturally has to go through the shop for a general overhauling. The cost of the waste and polish used in cleaning the electric headlight is very little; I give them a ticket for half a pound of waste every other day, a four hundred miles run, and that cleans the entire engine about the running board. As a rule, the engineer buys his own polish, and he often cleans the reflectors. We care for our reflectors ourselves, but as to the polish, that is a small matter. I judge it is worth about four or five cents a pound. A pound would last about four or five months, just cleaning one engine's reflector. As to the other expenses about electric headlights, it takes about a tablespoonful of oil for the two bearings. It is so little, I don't suppose it would be noticed, the engine is so big. That would last all night. The oil that should be used on it, which is the best oil, costs about fifty cents a gallon. Yes, sir; a gallon of oil would last a couple of years. No; I have had no cost in keeping up the electric headlight, from the expense of labor. I don't
180 know anything about the expense of labor, other than at the big shops I think they keep one machinest and one assistant to keep up all the headlights. We have about a hundred and twenty five engines running into Macon. They look after them all, except the engineers who look after their own. Some don't have time, on some of the divisions. A mechanic gets $3.40 per day; I suppose the machinist who keeps up the headlights gets the same, but what they pay the young man that looks after the lights, I don't know. The one that does the work in the shop gets $3.40 a day. Yes, sir; it takes all of his time. I don't think he does any other work. No, sir; I don't know any expense my engine has cost except the bushing, in the last two years. If they have done it, I don't know it, and I would report the necessary work. The pipe that conveys the steam to the turbine wheel is a ¾ inch pipe, and then the steam goes through two ⅜ inch holes. That puts the turbine in motion. You couldn't estimate the cost of the water used in generating the electricity in getting the light, because it would be impossible for us to tell that on the road, because sometimes we are drifting and the engine has a full head of steam, and naturally, when you shut the steam off from the cylinders, you are more than apt to have a little waste out of the pop. A little of that would be consumed by the headlight. As to what per cent of the time I am running at
181 night, the headlight is started about 2:30, and runs about three hours. Yes, sir; I have run with both the oil lights and the electric lights. I couldn't perceive any difference at all in the consumption of coal for the different lights. As to whether I run my train at all in the day time, I come back in the day. I couldn't tell the difference in the consumption of coal in the day and night. We consume more coal going over in the morning, from the fact that we have a heavier train. That is in the night, early in the morning. It is impossible for me to say whether there would be any difference with the same class train. Of course, we would use less coal in the day, because we would not have the handling of the

sleeper. I never noticed that the fact that we had the headlight burning made any difference in the coal consumed. I know it has not cost me from $250 to $400 per year to maintain the electric headlight. I don't see how it could possibly consume two hundred dollars' worth of coal. I average a little less than five tons of coal on my trip, about forty miles to the ton. Of course, it varies in the quality of the coal. I have made fifty three miles on a ton. The general average for the last six months was forty six. I run two hundred miles a day. It takes 3:20 going, and three coming back. It takes about five tons of coal. We keep the engine fired while we
182 are laying over at Columbus. The horse power of my engine is about 450 to 500. I have figured out the actual cost in the consumption of coal in the electric headlights in horse power; I think it is about one horse power in my engine. My engine is about 500 horse power, and burns five tons of coal to the number of hours she is on duty. No; I have never noticed any diminution in the motive power of my engine caused by having the electric headlight on it; it don't have any effect, as far as I can see. I have no connection with figuring out the coal consumption.

E. A. LINAN, sworn for the State, testified as follows:

I have recently worked for the Southern Railway, which used electric headlights. I was located in Atlanta. I worked for the Southern something over three years, off and on; I worked for them twice. No; I am not working for the Southern Railway now. I left the Southern about two months ago. I have worked for the Southern, Central, Atlanta & West Point and A. B. & A., which use electric headlights. They all used the same lights. I was electrician for all of them. My duties as electrician made me keep up the repairs of the headlight, the light and case and all parts of the headlight. I had the actual duty of looking after the electric apparatus that produced the electric current for the headlight. I don't
183 remember how many trains I had to look over when I was connected with the Southern, but I had twenty two engines a day for the Southern, to go over. Yes sir; I would go over twenty two a day by myself. It would generally take about fifteen or twenty minutes to an engine, when there was nothing serious wrong. I would oil them, and see if they were all right. Yes; I would look to the condition of the carbon, at different times in the day. I polished the headlight reflectors sometimes, when they needed it. That would take five or ten minutes. I wouldn't do anything much, just take a little waste and a little lamp black, and polish it. Electric headlights are not very complicated machinery. Yes sir; the average engineer understands how to keep them in repair. I think the most expensive part is the wearing of the bearing or bushing. The bushing is the bearing that controls the mechanical part of it, such as the shaft. The shaft works in the bushing. That is a large brass bushing. The whole bushing weighs about three pounds; the short one weighs less than that. I have watched it pretty close, and I think the average bushing should last six or eight months; that is, where they get the best kind of attention.

Sure, they will last longer if they get attention by the engineers that are operating the headlight. If an engineer gives ten minutes a day, and the oil is kept clean, and there are no cinders in the box, the bushing will last from eighteen months to two years.

184 Sure, engineers can look after keeping it up, if they will. I don't know exactly what the bushing costs, but about eight cents a pound in the rough. Yes sir; it weighs about three pounds. There isn't much difficulty in putting in a bushing after it is turned. Machinists turn it in about two hours. After the first turning, you can have it remetaled and put back, or it might be turned and used on another machine. The oil for an electric headlight is not a big cost to the company. After you put on a new machine, you fill both boxes, and the first trip will take about three gallons; then when it comes back, you put a little more oil in. If you put too much in, the oil will run over. It doesn't take more than a teaspoonful each trip. Yes; that is inexpensive. You don't use very much waste to rub off a headlight and machine. I draw five pounds of waste once a week to use on the headlight and the motors, generator and reflector, on twenty two engines, and to wipe my hands on, and anything that comes to hand, tools and everything. I don't know exactly what waste costs, but it is about five cents a pound, may be three cents. The Southern Railway paid me 22½ cents an hour. At first, I worked nine hours a day, and then they cut down to eight. As to whether I had any experience with signal lights, I kept up a line of signal and block system. I didn't see any difference in the effect of electric headlights on those signal lights. No sir; electric lights do not change the color of the signal

185 lights. I don't see why the electric light would change the colors; I have never seen it do it, and I never heard of it. Yes sir; I worked on a block system. You hardly ever have to renew the armatures on the electric lights; when one gets in condition to wear out, you have to send it back to the factory, or you can re-wind it. They cost $25 new; then you take the old one and ship it back to the factory, and they will send you a new one, and use the old one, and allow you five dollars. That means that the re-winding costs five dollars, five dollars between the old one and the new one, not twenty dollars. I have never seen one wear out, only from neglect. If you let the bushing wear against the pole pieces, it will wear out, but if the armature is kept in good condition and never allowed to hit the pole piece, it will last from two to five years. The reflectors in electric headlights are simply slipped into the case, and there are two screws that hold it in. You can use the 18 in the 23-inch case, but you can't use the 23-inch reflector in the 18-inch case. Yes; they can be made large enough to hold any reflector. That is done. You can change the electric headlight to an oil headlight in the same case. That is done now.

Yes, sir; I am a native of Georgia. I first commenced this work April 1st, 1904. Since that time, I have been off and on the railroads ever since. The first road was the Southern. I came to the

Central of Georgia then. The next one was the C. N. O. &
186 T. P. The next was the A. B. & A. Then I came back to the Southern. During the time I was working for the Southern I was located at Atlanta. Yes, sir; the Southern Railway had twenty two engines that were equipped with electric headlights. I never had anything to do with the engines on the west end; that is another division. I had the engines between Atlanta and Chattanooga, Atlanta and Columbia, and Atlanta and Greenville. I don't know whether those were originally three separate runs, or not. I don't know how many engines the Southern Railway had on those divisions that were handled in Atlanta. I went over twenty two a day. I don't know how many they had in all. I don't know whether all the Southern engines were equipped with electric headlights, or not. Most of the passenger engines were. No, sir; most of the freight engines were not. The number of engines handled in the round-house in Atlanta was between twenty two and twenty six or thirty. Some came in at night, but I didn't see them. I never had anything to do with anything but the passenger engines. I worked on all engines equipped with electric headlights at that time; they got some better engines since that time. They are at a different round-house. That was while I was away from them. I don't remember how long they have had them. I am not in the employ of any railroad now. As to whether I qualify as an electrical expert in this case, I don't know what you might call me. I
187 have been keeping up these electric headlights. Yes, sir; I understand electricity. As to how much candle power it means to say that the headlight must consume 300 watts at the arc, that depends on what size reflector you use. No; watts don't depend on the reflector; that is the power used. As to how much the candle of a light would be that consumed 300 watts at the arc, without a reflector, the Pyle Company rate their lamp at one hundred candle power without the reflector; I never did test it. Their light consumes more than 300 watts at the arc. A light that consumed 300 watts at the arc, without anything around it, without any reflector and without any glass, would be 100 candle power. As to whether I say that it takes three watts to make a candle power, I never figured that out. If you put a reflector behind it, it is greatly magnified. I can't tell you how much. Yes, sir; the twenty two engines I handled every day were all equipped with the Pyle standard light. All the roads I worked for had the same light, the Pyle. The carbon can be put in anywhere. That was my job. No, sir; I didn't have any assistant when I was in the employ of these roads as electrician. Sometimes I had a negro that helped on the other work, not the headlight. Yes, sir; I did all that myself. Yes, sir; I worked from eight to nine hours a day. No, sir; I didn't know anything about those that came in at night.

188 I have never been to an electrical school. I got my knowledge in a practical way. I never had any experience in measuring electricity. The statement I made about the power of the light, I had no information, only what I studied out of the instruction books. I am not familiar with measuring electricity, only from hearsay; I have no technical knowledge, only from work. I

never ran an engine, only handling them around the yard. I have run a stationary engine. I have ridden on an engine on the road. You know well enough you can't see a light change color in the electric light. Go take a look.

R. S. PALMER, sworn for the State, testified as follows:

I work for the Georgia Railroad. I burn an oil headlight. It doesn't give any satisfaction to me. I have noticed the operation of the electric headlights, to some extent. The electric headlight is better, because there is no comparison in the distance you can see. The engineer can see much further with the electric headlight. Any person on the track can see the electric headlight decidedly further. I never had an electric light. I have run behind an oil light for twenty years, and at times, on an ordinarily bright moonlight night, you can't tell whether the oil lamp is burning, without going around and looking at it. On a night when the atmosphere is hazy, and light is enclosed in haze. I have had it so you
189 couldn't see ten feet in front of the engine. Yes, sir; if the glass in front of the lamp breaks, the light will go out. I ran about four years on a branch road where I had to keep up an oil headlight, and I found it decidedly troublesome, in keeping it from leaking, and in fixing the wicks and chimneys, and sometimes it would smoke very badly. The Georgia Railroad tried the acetylene headlights one time, one light. I would rather have the oil light than the one I had then, because it wouldn't burn all the time, and then it had a very deep reflector, and it threw a very small ray out. When it burned, it was a good light in a small place. I don't think there is any comparison at all between that and the electric light. The electric light is far ahead of the other. The Georgia Railroad discarded the acetylene headlight. There is no other trouble with the acetylene light that I had experience with. A little test happened about three months ago. I was coming out of Atlanta at 12:10, and came to Lithonia, and soon after leaving that, I met a negro with a lamp, and he flagged me, and I stopped, and he had found a switch prized apart, and a piece of rock put between it. If I had gone ahead, I would have gone into the sidetrack. That would have been disastrous. I believe I could have seen that with an electric headlight. The Georgia Railroad has nothing but oil headlights.

This acetylene experiment was some four or five years ago.
190 I do not know whether there have been a great many changes in the patent since then. The one I had was a self-generator.

With an oil headlight in good condition, you can see from 180 to 200 feet; that is, you could see the outlines of an object, but you couldn't discover what it was.

T. C. WATERS, sworn for the State, testified as follows:

I am a locomotive engineer; have been for twenty years. I have worked only on the Southern. I worked one year in the shop, as an apprentice only. From there, I went on the road as fireman, and worked up to engineer. I am a locomotive engineer now, employed

by the Southern. I run a passenger train. I have a Pyle National headlight; I have had it about nine years. I have run about that time with an electric headlight. I used an oil headlight previous to that time. Undoubtedly, the electric headlight is better. The electric headlight ranks second to the automatic air brake as a safety appliance. I say it is a safety appliance because it saves the company's property. In my experience, it has saved it in many instances. It saves the life and limb of people because the engineer can see things on the track. There are many instances where I have stopped a few yards before running into switches. I don't remember the dates. I remember three instances in which I
191 think the company's property was protected by the use of the electric headlight. One of those was not a year ago, going through the new yard at Dalton, Georgia. There is a switch with a very low stand and no light on it, and it was set for the side track when I came on it, and there would have been an accident if I hadn't seen the rails separated, and seen the switch open. I set the switch up, and proceeded. Two others were alike, and at about the same place. I found some large rocks on the track from heavy rains, and stopped. I could not have seen these things and stopped with the oil headlight. I have seen one acetylene headlight burning. My experience as to where the electric light will throw its rays on a straight track, is this: I am running an engine that has a standard Pyle electric headlight with a reflector that is almost worn out. The nickle is worn off almost entirely. I can see an object the size of a cow or a dog a quarter of a mile. I can see from the whistle post any objects on the crossing. Our whistle posts are one quarter of a mile from the crossings. No; I could not see the same object that far with an oil headlight. I don't think I could read figures five inches high that far. If I had a reflector in perfect repair, I think I could see twice the distance. It shows objects on the track better than anywhere else, because the light falls on the rails. I had
an oil headlight last week for one night, and it is absolutely
192 useless for safety purposes. Knowing that this was coming up, I took particular notice. You can see one or two telegraph poles, but nothing on the track. I think a hundred and fifty feet is as far as you can see on the track, but you can't see distinctly. The oil light was on a freight engine. There is no certainty about how far telegraph poles are apart. I should judge those I tested were about forty five to the mile; I have not counted them. I think you could see an object the size of a man on the track 100 or 150 feet, at the outside. You could just see the outlines; you couldn't tell what is was. We have no trouble in keeping up the electric headlight. The engineers on our road don't keep them up. A man goes on every engine every day, and puts in a carbon. I have not done anything except remedy defects that occurred on the road. We keep up our lights in that way. As to whether I have had any serious trouble on the road during the nine years I have had an electric headlight, my light went out twice. I want to add, that was on account of wires burning out, and being on a fast passenger schedule, I ran on without a light, rather than lose the time to fix it. As to

how often they overhaul the lights in the shops. I don't know of any being taken off completely, and we have used them for twelve years. Yes sir; we had trouble with the oil lights. I have had more of them to play out entirely than the electric lights. I heard the testimony of Mr. Smith and Mr. McCraney in reference to the consumption of coal by electric headlights. It is not possible for one of these electric headlights with a 23-inch reflector, burning 500 watts at the arc, to consume as much as $250 to $400 worth of coal a year. The apparatus was quoted to me at $260, and putting it on the engine at fifteen dollars at Atlanta. When you get them on, there is only the expense of the carbon, which is very little, about one cent per night for the carbon, and a little bit of oil, which is so small it wouldn't cost the company anything. The item of coal, based on my knowledge of machinery, they wouldn't use over twenty dollars' worth of coal in twelve months. It is true that the light uses a great deal of steam that would go off in waste if you didn't have the light. I figured it on the basis of horse power, and twenty dollars would run the light about a year, but in the case of actual conditions on the locomotive, the light is using waste steam on account of the engine being drifting or standing, and it would be less. Yes sir; I run my engine in the day and in the night. There is no perceptible difference in the consumption of coal, between the night and day. The Southern Railway uses the telegraph block system, not the electric block system. They use a semaphore and signal lights, the standard signals. Only on one occasion in my experience have I ever known anything wrong with signal light. No; it was not changed in color; it was on account of the position of the semaphore pole. It was the same with the oil or electric. It was on account of the fact that there was a slight curve at the semaphore. The track was straight beyond that. The lenses were not exactly between the vision of the engineer and the white light. He could see between these discs. To fix that, it was necessary to turn the post at the proper angle. With the electric light you would know whether the semaphore was red or white without any light in it. The semaphore would show that. The semaphore would show plainly with the electric light; with the oil light, you couldn't see it. I have reference to the day and night signals appearing at the same time. I have never had any experience in the electric light changing the color of signals in the slightest. As to whether it is necessary for engines meeting each other to give signals, the standard rules, on all roads I know of are, when engineers pass classification signals, and his train would be affected by the signals, then the engineer must call attention to the signals and must be answered, as a safeguard against the man overlooking the classification signals. Yes sir; that is the rule of the Atlantic Coast Line, the road Mr. McCraney works for. Yes sir; he is mistaken about that. Yes sir; I have read the rule recently. I have it in my pocket. You could only test the amount of coal the electric headlight will consume, and the amount of water it will consume, by a stationary engine, in one way. I don't know how any tests have been made, but the only way is to couple it to

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an engine, and don't take the steam used by the engine, but to have the steam used by the machine, and condense the steam, and say that a pound of water equals six pounds of coal. No sir; you can't get it by charging up to the light the amount of steam it takes to operate the wheels; you can't connect it to a stationary engine and figure the amount of steam made by the engine. Any boiler will show a waste of about ten per cent, and that is charged to leakage, even though there is no leak. When you attach it to a locomotive, it is not proper to charge to that machine the coal and water consumed to run the engine, except the portion that is absolutely required to develope the horse power that is necessary to create the current. I am not familiar with the size of the pipe that conveys the steam to the turbine wheel, but from information my impression is that it is two ¾ inch pipes. Yes sir; that steam is expanded four times, when it goes into the turbine. I consume an average of six tons of coal in 150 miles. It takes five hours and forty minutes to run it, on a local passenger train. Yes sir; I burn an electric headlight. It takes the same amount of coal in the day time as at night, there is no difference at all. The horse power of my engine is approximately 500. There is no absolutely correct way to ar-
196 rive at the horse power of a locomotive. It is not determined by horse power, but by traction force. Horse power is the old English way, but that is not a definite way. The present way is by tractive force, which means a certain weight could be lifted out of a pit by an engine on a straight track. 746 watts are about one horse power, but there is no absolute way to determine the horse power; it means as much as one horse can pull. 300 watts is equal to about 1500 candle power, without any reflector. Less than one half of one horse power would comply with the Georgia law of 300 watts.

No sir; day light is not better than electric light, not for all purposes. I didn't know the question was general at first. Yes sir; I have known of an engine running into a spread switch in the day time. A spread switch or an open switch is represented by a displacement of the rail from two to three inches at the point. Yes; it is a very small space. I have heard of engineers running into that kind of place in the day time. Yes; we are able to see one of those open switches in the night time with an electric headlight. In the case I spoke of, on account of a curve, I saw it about 250 feet. I was going about fifteen to eighteen miles an hour. I had only a three car train. Yes sir; I can stop a three car train going eighteen miles an hour in 250 feet. I don't find it to be the case that when a man's eye is accustomed to looking forward down the lighted track, the darkness on both sides is greater, that the pupil of
197 the eye is accustomed to the light, and when he looks into the dark, he can't see at first. It isn't the fact in the case of running a locomotive, because you can see your landmarks just as well or better than with the oil light. Of course, if you are looking down the track, and then looked off, there might be a minute you couldn't see. As to whether it is the law of optics that when a man who has been looking into a light looks away from the light, he can't see as

well as a man who has not been looking at the light, I can only give you my actual experience, and that is not the case in my experience with those lights. Yes sir; when you go out of a bright room into the dark, you are practically blind for a short space, but we don't look into the light we are running with. No; the pupil of the eye has not adjusted itself to looking into the lighted space, so that when you look into the dark area, you can't see distinctly, because the light is a soft white light, and doesn't affect the eye. As to the revolutions of this thing, my knowledge is this, that the wiring and carbons are not capable of standing a resistance of over 220 revolutions a minute, and that excessive speed is prevented by two governors, and if anything should happen to one of those, you would have to throttle down your steam, or you would burn up the light. No sir; if the governor got out of order, it would not burn it right out; your light would burn green, and you would know what
198 was the matter, and could throttle down the steam. As to how fast the revolutions are when it burns green, they will burn those electrodes at twenty two or twenty three revolutions a minute. The speed to run it right is at about 1800 revolutions a minute, some at 1700. I believe the makers claim that 1700 is best. When you are running it at 1800 revolutions, you are using a little more steam than at 1700, practically nothing. As to whether it is true that it takes four watts to make a candle power, so that a man can look at a 16-candle power light and say that it takes sixty four watts to run a 16-candle power incandescent light, or that a kilowatt will run sixteen 16-candle power lights, a watt is a unite of power that has been used; it will not produce anything, because it has produced something. Yes sir; a watt is 1 1000th of a kilowatt. A kilowatt is one and a quarter horse power. A watt is the result of the power, just like a kilowatt. The current is measured by three unites, one is the ampere, and the other is the volt. The ampere is the current being used, and the volt is the pressure of that current. Watts is the unit of the power used. The watt is the power developed. The kilowatt coincides to what we call horse power; a kilowatt is one and a quarter horse power. The kilowatt is a unit of power, and the watt is the sub-division of the kilowatt; therefore it is a unit of
199 power. As to whether it takes four watts to furnish the power that is sufficient to generate a candle power, I am not posted on that. I think the candle power produced is something like the horse power, because there is no way to reduce one to the other exactly. I do not claim to be an electrical expert. The voltage of the Pyle headlight is thirty five; the amperage is thirty five. You multiply one by the other, and that gives you the watts. Running at 1700 revolutions, it will produce more watts than that. The product of the amperes and volts gives you the watts.

With an electric light throwing the rays on the track in front of the engine, you could see a defect in that track better than you could by daylight. Yes sir; that is what I meant by the electric light being better than day light. In day light, the light is even over the entire country; there is no bright streak on the track; it shows the same color. With the electric light, it shows the rail

as being a bright streak, and if there is any break in that rail, you can see it with the electric light twice as far as you can in daylight. As to whether the darkness that surrounds this light makes it brighter because it is more concentrated, it makes it appear more than daylight where it falls on the track. No sir; my duty does not cause me to look to the side of the track. My duties are to look ahead. The electric headlight is the better light in damp atmosphere; it will penetrate a fog further than the oil light. I
200 never heard of the electric light affecting an engineer's eyes injuriously. Mine are good. I have never worn any glasses, and I stood the regular examination on eyesight, and passed without any trouble. The nine years' use has never affected mine. Yes sir; electric lights prevent head-end collisions. I have experience in that every night on the road. I meet two passenger trains, and all passenger engines are equipped with electric headlights. I can see them before I get to the meeting point. I can see one of them five or ten miles, and I can tell where — is. That could not be done at all with the oil light. It has not been my experience that this electrical apparatus that generates the light affects my watch in any way, and I have had my watch with me when I was working on the defective reflector I had been trying to fix, and my watch never has lost any time. I have it compared every week, and it shows nothing but a few seconds wrong. That is not caused by the headlight. Every watch will vary a little bit. In my experience, the electric headlight has never changed the color of a light or fusee. The witness who testified on that is mistaken. It has no effect on them, and there is a day signal above all lights, and it has no effect on that. The testimony with reference to the electric light going just 150 feet further than the oil light is true under these circumstances: The electric
201 light can be put in such condition in one minute that you can throw it out of focus so that it will show only a short distance ahead. The engineer can do that in one minute. He can throw his light down the track, or up in the air, or he can spread the light. In making these tests, one who is not in favor of the electric light could so arrange the electric light that it would show a very short distance. At the proper focus, it will show at the distance I have before testified.

The nick*le* plating is worn off my reflector. I am not doing anything for it, just keep it wiped clean, and it shows a safe distance now. A man can't change the reflector from the cab of the engine; he has got to go out and raise it. The point of contact of the carbon and electrode has to be in the center; if it isn't, it won't throw the light to the proper distance. The oil light and the electric light have the same reflector. The one I use for the electric light could be converted into a lamp light. You can't transfer the oil lamps we use into the electric case, because they have no oil tank, but the same reflector at the shop could be used for both, or either. It couldn't be done out on the road, not putting a standard kerosene lamp in the same reflector, but you can take out that reflector, and put an oil lamp in the same space. No; that doesn't have to be done at some shop. You couldn't convert an elec-

tric light to an oil light without taking it out of the case, but
202 you can take the whole thing out and substitute one that is equipped for oil. The engineer is not required to look to the side. The rules require him to keep constantly on the lookout ahead. In coming around a curve, and before the light is straight, it is exactly the same as it is in daylight, because you can't see any further around the curve than you can in daylight. There is no portion of the track that would be discovered in the daylight that is in darkness. The engineer's eyes are not riveted to the center of the light, and the light is not in a spot this size. (Indicating.) There is quite a wide volume of light; and it will throw the light as far around the curve as a man can see in daylight. No sir; an engineer is not blinded by looking into the lighted space, when he turns from it out in the night. It is a fact that when he comes to a curve, the rays of light go away from the track and the engineer's eye turns to a place in the darkness, to a certain extent, and a half mile or mile around that curve that bright light would not show on the track, but I never experienced any difficulty in seeing a light up that track, than if I didn't have a light on the engine. You can look aside and see it, almost instantly. The effect of this light doesn't cause any darkness similar to look at a light. We are looking at a soft white light. It never happens on an electric headlight that the carbon sputters and gets caught and doesn't come down properly, if they are kept right. Yes; it does happen. That does not dis-
203 turb the focus. It is not difficult to fix the focus; it is the simplest thing in an engine. It has to be placed in the center, but there are set screws. If the carbon burns unevenly, it doesn't disturb the focus. If the carbon doesn't burn, the light will go out. No sir; there is not a time when it doesn't go out, but is defective. They have an adjustment spring that keeps the carbon right. It only takes a minute to adjust it. You can tell whether it is too tight or too loose, and you can adjust it.

I don't know whether the headlight cases are interchangeable, so that a 16 or 18-inch reflector could be placed in the case made for a 23-inch reflector. That whole question is bosh, for this reason; that there is no such thing as a requirement of that kind, and if there was, the case could be made large enough to hold the largest reflector, and it would suit all. It would be simple to change the reflector and put in another, if it was necessary. The change from electric light to oil light, and changing the reflectors; as testified to by Mr. Kline, can be done. You can put a standard oil light in the same case as the electric light. You can change the reflectors by taking out the whole reflector, and putting in the other. That can be done very quickly; it would not be necessary to have any plant there, or any place to store them; they could carry it on the engine and use it if the occasion should arise.

204 Yes sir; I said that if you have a case large enough to carry a 23-inch reflector, you could put in either a 16 or 23-inch reflector. If you have one for a 16-inch reflector, you can't put in the 23-inch reflector, not if it is built that way. We have 16 and 18 inch reflectors; most are eighteen. They are on all the Southern

equipment that runs into Atlanta. We are using 16 and 18 inch reflectors. Yes sir; this law calls for 23-inch reflectors. Yes sir; making these changes depends upon the size of the case. As to whether, if South Carolina should introduce a statute requiring the use of acetylene gas, and we came to the Georgia line, we would be able, without the assistance of mechanics, and on our run, in the woods, away from a shop, to make the necessary adjustments for the electric headlight, I am not thoroughly familiar with the necessary changes from the acetylene light. I have never seen one coupled up. I have seen one in a show room, but my opinion, if you will take that, is that there would be very little difference between that, and the oil and electric lights, possible undoing one pipe. Yes; I think we could take off the pipe by which this gas is carried to the focal point, and the next time screw it on, in the woods, without the assistance of a plumber. If there is any engineer that is not able to do pipe work, he is no good. We have the pipe tools. There is a great deal of piping about an engine, and the danger of its
205 working loose, and we have a great deal of trouble on account of its working loose. I don't think we would have trouble in changing it, if we had a stop cock so it wouldn't escape. It wouldn't require any more mechanical knowledge than is already required on the engine. It is a very simple transaction, just to change it from day to day, as far as my knowledge goes, because I understand that there is only one pipe that carries the gas. I have never seen one coupled up.

As to which gives the best light, the 23-inch reflector, or the 16, the 23-inch reflector is a satisfactory light. The larger the reflector, the better the light, if you hold the depth. You can take a 10-inch one, if it has the right depth, and give more light than a 23-inch one that spreads the light too much.

State rests.

R. E. McCREANEY, recalled for the defendant, testified as follows: The headlights in the test I made and described, were in first class condition. They were properly focused. We threw the light down the track properly. We selected two of our best headlights, and handled them properly. The tests were made with a desire to make a fair test. We were anxious to get at both sides of the question, and we made it as accurately as we could.

206 I do not know what the speed of the dynamo was. I am not an electrician.

The light being generated was of the kind, in brightness, that is usually seen on a headlight in operation, and the headlights were burning properly.

I don't know whether the light had two carbons, or an electrode. We burned two carbons. I don't know whether that is the old-fashioned light, or not. I understand some electric lights have an electrode at the bottom, where they used to have the carbon; I don't know whether it is necessary. I don't know much about the mechanism of the electric light. I do not know that, as a matter of fact, you can't keep a headlight of two carbons properly focused.

207 WAYCROSS, GA., *Feb. 6th,* 1909.

Test of Electric and Oil Headlights.

Test No. 1.

Feb. 2d, 10:00 p. m. Weather conditions, moonlight, with atmosphere a little hazy. Engine 528 was placed on straight track and man was stationed in front of the engine in center of track at the greatest distance from which he could be seen from the cab of the engine. The distance was then carefully measured, and found to be as follows: with the electric headlight, 412 feet, and with the oil headlight, 330 feet.

Test No. 2.

This test was made at the same time as Test No. 1, and under the same weather conditions. A sheet of black tin, with white figures 3½ inches by 5 inches in size, was placed on a man's back and he walked from the front of the engine in the center of the track to the greatest distance that the numbers could be read from the cab. After carefully measuring the distance, it was found that with the electric headlight the figures could be seen 168 feet and with the oil headlight, 139 feet.

Test No. 3.

This test was made at the same time and under the same conditions as Tests Nos. 1 and 2. A standard caboose car was placed on the track in front of the engine without markers, and engine was
208 moved back from the caboose as far as it was possible to plainly see the caboose. This distance was measured, and found to be 635 feet. After testing both lights at the same distance, it was found that there was no perceptible difference, and test was then made without any lights, and it was found that the caboose could be seen as plainly without the lights as with them. We also found that we could see a man 300 feet without the lights. This on account of the moonlight.

Test No. 4.

Feb. 4th, 1909. 9:00 p. m. Weather conditions, moonlight, with atmosphere a little smoky. Engine 523, equipped with electric headlight, was headed south on straight track, and engine 306 equipped with electric headlight, was headed north on parallel track. Caboose car was then placed 1800 feet in front of engine 528 on parallel track, and there were no lights in caboose or surrounding it; notwithstanding, a bright light of greenish cast, about the size of a switch target, showed plainly where the caboose stood from the cab of engine 306, which was standing alongside of engine 528. Engine 306 was then backed up toward the caboose, and the light could be plainly seen until the engine was within 570 feet of the caboose, when the light disappeared. This false or imaginary light was caused by the reflection of the headlight of engine 528 on
209 glass window in cupola of caboose, and was very deceptive.

equipment that runs into Atlanta. We are using 16 and 18 inch reflectors. Yes sir; this law calls for 23-inch reflectors. Yes sir; making these changes depends upon the size of the case. As to whether, if South Carolina should introduce a statute requiring the use of acetylene gas, and we came to the Georgia line, we would be able, without the assistance of mechanics, and on our run, in the woods, away from a shop, to make the necessary adjustments for the electric headlight, I am not thoroughly familiar with the necessary changes from the acetylene light. I have never seen one coupled up. I have seen one in a show room, but my opinion, if you will take that, is that there would be very little difference between that, and the oil and electric lights, possible undoing one pipe. Yes; I think we could take off the pipe by which this gas is carried to the focal point, and the next time screw it on, in the woods, without the assistance of a plumber. If there is any engineer that is not able to do pipe work, he is no good. We have the pipe tools. There is a great deal of piping about an engine, and the danger of its
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As to which gives the best light, the 23-inch reflector, or the 16, the 23-inch reflector is a satisfactory light. The larger the reflector, the better the light, if you hold the depth. You can take a 10-inch one, if it has the right depth, and give more light than a 23-inch one that spreads the light too much.

State rests.

R. E. McCREANEY, recalled for the defendant, testified as follows:

The headlights in the test I made and described, were in first class condition. They were properly focused. We threw the light down the track properly. We selected two of our best headlights, and handled them properly. The tests were made with a desire to make a fair test. We were anxious to get at both sides of the question, and we made it as accurately as we could.

206 I do not know what the speed of the dynamo was. I am not an electrician.

The light being generated was of the kind, in brightness, that is usually seen on a headlight in operation, and the headlights were burning properly.

I don't know whether the light had two carbons, or an electrode. We burned two carbons. I don't know whether that is the old-fashioned light, or not. I understand some electric lights have an electrode at the bottom, where they used to have the carbon; I don't know whether it is necessary. I don't know much about the mechanism of the electric light. I do not know that, as a matter of fact, you can't keep a headlight of two carbons properly focused.

207 WAYCROSS, GA., *Feb. 6th,* 1909.

Test of Electric and Oil Headlights.

Test No. 1.

Feb. 2d, 10:00 p. m. Weather conditions, moonlight, with atmosphere a little hazy. Engine 528 was placed on straight track and man was stationed in front of the engine in center of track at the greatest distance from which he could be seen from the cab of the engine. The distance was then carefully measured, and found to be as follows: with the electric headlight, 412 feet, and with the oil headlight, 330 feet.

Test No. 2.

This test was made at the same time as Test No. 1, and under the same weather conditions. A sheet of black tin, with white figures 3½ inches by 5 inches in size, was placed on a man's back and he walked from the front of the engine in the center of the track to the greatest distance that the numbers could be read from the cab. After carefully measuring the distance, it was found that with the electric headlight the figures could be seen 168 feet and with the oil headlight, 139 feet.

Test No. 3.

This test was made at the same time and under the same conditions as Tests Nos. 1 and 2. A standard caboose car was placed on the track in front of the engine without markers, and engine was
208 moved back from the caboose as far as it was possible to plainly see the caboose. This distance was measured, and found to be 635 feet. After testing both lights at the same distance, it was found that there was no perceptible difference, and test was then made without any lights, and it was found that the caboose could be seen as plainly without the lights as with them. We also found that we could see a man 300 feet without the lights. This on account of the moonlight.

Test No. 4.

Feb. 4th, 1909. 9:00 p. m. Weather conditions, moonlight, with atmosphere a little smoky. Engine 523, equipped with electric headlight, was headed south on straight track, and engine 306 equipped with electric headlight, was headed north on parallel track. Caboose car was then placed 1800 feet in front of engine 528 on parallel track, and there were no lights in caboose or surrounding it; notwithstanding, a bright light of greenish cast, about the size of a switch target, showed plainly where the caboose stood from the cab of engine 306, which was standing alongside of engine 528. Engine 306 was then backed up toward the caboose, and the light could be plainly seen until the engine was within 570 feet of the caboose, when the light disappeared. This false or imaginary light was caused by the reflection of the headlight of engine 528 on
209 glass window in cupola of caboose, and was very deceptive.

Test No. 5.

This test was made at the same time as test No. 4, and under the same conditions. Engine 528 was headed south on straight track, and engine 306 headed north on parallel track. Both engines with electric headlights burning brightly. Standard markers, or white lights were placed on the front of engine 528, and engine 306 moved back until it was impossible to see the white lights. The distance between the two engines was then carefully measured, and found to be 480 feet. The reflection of both headlights shining together, shut off entirely the view of all other lights.

Test No. 6.

This test was made Feb. 6th, between 8:00 and 10:00 p. m., while riding in the cab of engine 287 on passenger train 57, between Jesup and Waycross. Engine 287 was equipped with the stand electric headlight. Weather conditions, moonlight, with atmosphere somewhat smoky, account of woods being on fire. At no time during this trip, in our judgment, could an object on the track be seen in time to stop before hitting same, while the train was running on schedule time, and in several places where the smoke was thick, it was impossible to see any distance whatever ahead of the engine.

On reaching Dean's Still, five miles east of Waycross, we
210 saw a bright light, apparently an oil light, which seemed to be about a quarter of a mile distant, in front of us. None of us knew where the light was located, except the engineer and fireman, who were familiar with the conditions. We found, upon investigation, that the light in question was an electric headlight on 306 which was standing at the passenger station at Waycross, five miles away, ready to take Train No. 32 to Tifton. The nearer we approached Waycross, the brighter the light became, and when leaving the river, three miles distant, the light was so bad we could see nothing, and ran this distance in space. We could have seen no object, no matter what size, at any point between the river and Waycross. On approaching Waycross, we discovered that the forearm semaphore, home signal, at Brunelle Street, which signal has to be given all trains entering Waycross Yard from Savannah, was eclipsed, and we could not see this signal until we passed under it. We also found, in this investigation, that the switch lamps, semaphore signals, etc., when coming in range of the electric headlights of two engines, in opposite directions, are eclipsed, and can not be seen.

The electric headlights used in making these tests are the standard Pyle electric headlights, with glasses 18 inches in diameter. The oil headlights used are the standard Dressel headlights with glasses
16 inches in diameter. All of the lights were in first class
211 condition during the test. On account of the limited time that we have had to make these tests, and there being no dark, rainy or foggy nights during this test, we have not been able to get very much information, but we will continue the test under different conditions and furnish result of same later on, if desired.

These tests were made personally by J. W. Oplinger, Superintendent of Motive Power, N. E. Sprowl, Shop Superintendent, and R. A. McCranie, Superintendent.

212 Acts of Indiana, 1909, Page 323.

Chapter 128.

An Act giving the Railroad Commission of Indiana specific powers to investigate and determine as to the efficiency of headlights now in use on locomotive engines on the railroads in Indiana, and to prescribe efficient and practicable headlights now in use on locomotive engines on the railroads in Indiana, (sic) and to prescribe efficient and practicable headlights and to make and enforce orders with reference thereto, and declaring an emergency.

(Sec. 44. Approved March 6, 1909.)

Railroad Commission—Locomotive Headlights.

SECTION 1. Be it enacted by the General Assembly of the State of Indiana, That, in addition to the powers heretofore granted to the Railroad Commission of Indiana, that said Commission be, and it is hereby specifically empowered, authorized and directed, as soon as practicable after the passage of this Act, to investigate the condition and efficiency of headlights now in use on locomotive engines on the railroads in this State, and, if found to be inadequate for the protection of persons and property, or any other purpose, to investigate and determine what would be the most practicable and efficient headlight for all purposes, and when the Commission shall have so determined, to make and enforce against the railroad com-
213 panies such order or orders as may be found necessary to require the equipment and installation of such headlights on the locomotives on the railroads in this State, and to this end, said Commission is given power in such investigation to examine the various kinds of lights that may be suitable for locomotive headlights, and appliances therefor, to consult experts in such matters and to require the attendance of witnesses and the production of papers, documents and appliances.

Emergency.

SEC. 2. An emergency exists for the immediate taking effect of this act; the same therefore shall be in force from and after its passage.

214 *Public Laws of North Carolina, Session* 1909.

Pages 770-771.

Chapter 446.

An Act Requiring the Use of Electric or Power Headlights on Certain Locomotive Engines.

The General Assembly of North Carolina do enact:

SECTION 1. That every company, corporation, lessee, manager or receiver owning or operating a railroad in this State is hereby required to equip and maintain and use upon each and every locomotive in operation in railroad service on main lines in this State, an electric or power headlight of at least one thousand five hundred candle power, measured without the aid of a reflector; Provided, that only twenty-five per cent of said locomotives not now so equipped shall be required to be so equipped or used by April first one thousand nine hundred and ten; another twenty five per cent by April first, one thousand, nine hundred and eleven; another twenty five per cent by April first, one thousand, nine hundred and twelve, and the remainder by April first, one thousand, nine hundred and thirteen; Provided, that this shall not apply to locomotive engines used exclusively between sunup and sundown, nor going to nor returning from repair shops when ordered in for repairs; Provided, further, that this shall not apply to independently owned and operated
215 railroad companies in this State whose mileage of road in this State is one hundred and twenty five miles or less, nor to railroads having only lines extending into this State, no one of which is one hundred miles in length in this State; Provided, further, the Corporation Commission may relieve from the operation of this act such locomotives and roads or parts or sections or branches of roads upon which the said Corporation Commission may deem electric or power headlights not advisable; Provided, further that should an engine start on a trip with the headlight in good working condition, and from some unavoidable cause such headlight becomes disabled and cannot be repaired on the line of road on which such run is being made, there shall be nothing in this act to prevent said engine from continuing on said trip, and the railroad shall not be liable for prosecutions on account of such failure.

SEC. 2. That any company, corporation, lessee, manager or receiver violating the provisions of this act shall be guilty of a misdemeanor.

SEC. 3. That this act shall be in force from and after its ratification.

Ratified this the 5th day of March A. D., 1909.

216 An Act requiring all railroad corporations, or receivers, or lessees operating a line of railway in the State of Texas, to equip its locomotive engines with electric headlights of not less than 1500 candle power without the aid of reflectors, or other headlights of not less than 1500 candle power without the aid of a reflector, and providing a penalty for the violation of this act.

SECTION 1. Be it enacted by the Legislature of the State of Texas: It shall be the duty of every railroad corporation or receiver or lessee thereof, operating any line of railroad in this State, within six months after the passage of this Act, or within such additional time as may be prescribed by order of the Railroad Commission of Texas, after a proper showing of their inability to comply by the railroad has been made, to equip all locomotive engines used in the transportation of trains over said railroad with electric headlights of not less than 1500 candle power, measured without the aid of a reflector. Provided, that this act shall not apply to locomotive engines regularly used in the switching of cars or trains.

SEC. 2. Any railroad company or the receiver or lessee thereof, doing business in the State of Texas, which shall violate the provisions of this act, shall be liable to the State of Texas for a penalty of not less than one hundred dollars, nor more than one thou-
217 sand dollars, for each offense, and such penalties shall be recovered and suit brought in the name of the State of Texas, in a court of proper jurisdiction in Travis County, Texas, or in any county in or through which such line of railroad may run, by the Attorney General or by the county or district attorney in any county in or through which such line of railroad may be operated, and such suits shall be subjected to the provision of Article 4577, Revised Statutes of the State of Texas.

SEC. 3. The fact that there is now no law requiring railroads to equip their engines with headlights of sufficient power, as provided in this bill, and the safety of railroad employees as the general public demand that this be done, create an emergency and an imperative public necessity that this act take effect from and after its passage.

(J. C. H., #3.)

We agree that the foregoing constitutes a correct brief of the * * * and documentary evidence admitted in the trial of the above stated cause.

This 27th day of Dec. 1909.

J. C. C. BLACK, JR., *Solicitor*,
T. S. FELDER,
Attorneys for the State.
McDANIEL, ALSTON & BLACK,
J. R. LAMAR,
Attorneys for Atlantic Coast Line R. R.

218 The foregoing Brief of Evidence is approved. This Jan. 25, 1910.

WILLIAM F. EVE,
Judge City Court, R. C., Ga.

Filed in office this January 25, 1910.
D. KERR, *D'p'y Clerk.*

STATE
vs.
ATLANTIC COAST LINE R. R.

Prosecution in City Court of Richmond County, Violation of Head-Light Law.

219 *Motion for New Trial.*

Now comes the Defendant, the Atlantic Coast Line Railroad and amends its motion for new trial, already of file, by adding thereto the following grounds:

(1) Because it affirmatively appears from the uncontradicted and undisputed evidence that Engine 373 mentioned in the accusation was, at the time mentioned in the accusation, engaged in hauling a train loaded with Interstate freight and engaged in interstate commerce.

(2) Because it affirmatively appears from the uncontradicted evidence that engine 373 referred to in the accusation was, at the time referred to and covered by the accusation, used in hauling interstate freight, and the equipment and operation of said engine could not be subject to the operation of the Headlight Law without materially, immediately and directly interfering with interstate commerce, in violation of the provisions of the Constitution of the United States, providing that Congress shall have power to regulate commerce between the States.

(3) Because it affirmatively appears from the uncon-
220 tradicted evidence that the Headlight Law approved August 17, 1908, causes a direct, immediate, material and serious interference with the operation of said engine 373, so as aforesaid engaged in interstate commerce, and in the operation of other engines of this defendant likewise engaged in interstate commerce, in violation of the provisions of the Constitution of the United States, providing that Congress shall have power to regulate commerce between the States.

(4) Because it affirmatively appears that engine 373 referred to in the accusation was, at the time referred to in and covered by the accusation, used solely on a run to and from Augusta, Georgia, and Florence, South Carolina, a distance of 168 miles, of which 4½ miles is in the State of Georgia, and the remaining 163 miles in the State of South Carolina, and that engine 373, and all other engines of the defendant, were lawfully equipped with good, safe and sufficient headlights, and while said engine 373 and other engines of the defendant could lawfully make the run from Florence, South

Carolina, to the Savannah River, when equipped with oil headlights, the said engine 373 and the other engines of defendant used in interstate commerce, would, in order to complete the run of 4½ miles from the Savannah River to Augusta, Ga., have to be equipped at great expense of time, labor and money with electric headlights, thereby hindering and delaying said locomotive and locomo-
221 tives and trains engaged in interstate commerce in violation of the provisions of the Constitution of the United States which provides that Congress shall have power to regulate commerce between the States.

(5) Because it affirmatively appears from the uncontradicted and undisputed evidence that engine 373 mentioned in the accusation, although not equipped with the electric headlight and reflector of the kind and character referred to in the headlight law, was yet well and sufficiently equipped with a good and safe oil headlight of the kind and character long and generally used in the State of Georgia and in the South.

(6) That said oil headlight on engine 373 had been in practical use and operation extending over two or three years in the States of Georgia, North Carolina, South Carolina, Virginia, and that such practical use demonstrated that said oil headlight was safe, sufficient and adequately served the purpose for which a headlight is used on a locomotive, and that during said period in which said locomotive had been in use in said States, no loss or damage to person or property had ever resulted by reason of the fact that the oil headlight was not safe and entirely sufficient to accomplish the purpose for which headlights are used on locomotives hauling and operating cars over railroads:

(*a*) And that to require this defendant to remove and
222 disuse said good, safe and sufficient oil headlight, and to substitute therefor an electric headlight and reflector required by the terms of said Headlight Law, would be to deprive defendant of its property without due process of law, in violation of the provisions of the 14th Amendment to the Constitution of the United States, and in further violation of Article 1, Section 1, Par. 3 of the Constitution of Georgia (Civil Code 5700) providing that no person shall be deprived of property without due process of law.

(7) Because it not only affirmatively appears that engine 373 referred to in the accusation was well and sufficiently equipped with a good, safe and sufficient headlight, safe and adequate for the purpose for which headlights are used on locomotives, but it also appears that the great majority of engines in the South and in the State of Georgia are, and for many years past, have been equipped with oil headlights, and there is no evidence in the record of any case in which person or property has been damaged by reason of the fact that oil headlights were used. And to require Defendant to remove the oil headlight now on engine 373, and the oil headlights on others engines belonging to it in the State of Georgia, which, in actual and long-continued practice, have proved safe, adequate and sufficient, and to purchase and substitute therefor electric headlights and reflectors of the character referred to in the Headlight Law,

is to deprive defendant of its property without due process of
223 law, in violation of the provisions of the 14th Amendment to the Constitution of the United States, in that:

(*a*) It deprives defendant of the use of, and forces it to abandon, several hundred safe, sufficient and efficient oil headlights of the value of $20 each;

(*b*) It requires defendant to purchase an equal number of electric headlights, at a cost of from $250 to $400 each.

(*c*) It deprives defendant of the right to manage its own property.

(*d*) It deprives defendant of the right to manage its own property, and forces it to purchase electric headlights, although oil and acetylene headlights are now in practical and successful operation on many railroads in the United States.

(*e*) It deprives defendant of its right to contract, in that defendant is forced to purchase electric headlights and reflectors, notwithstanding its belief and that of its officers based on practical experience, that the oil headlight is sufficient, and is superior to the electric headlight and better adapted to the uses and purposes for which headlights are used.

(*f*) It deprives defendant of its right to contract, in that it forces defendant to purchase electric headlights, although electric headlights are covered by a patent, and defendant will be forced
224 to pay such prices as may be demanded by the manufacturer, and when the passage of the Headlight Law will inevitably tend to increase the demand, and thereby increase the prices of such headlights.

(*g*) It deprives defendant of its right to manage its own business and affairs, it affirmatively appearing that the oil headlight costing $20, and kept and maintained in good order at small expense, is safe and sufficient, while not only the first cost of the electric headlight of $250 to $400 is more expensive than the oil headlight, but costs more to keep in repair, and said electric headlight is more liable to get out of repair, and is otherwise less desirable than an oil headlight.

(*h*) It deprives defendant of the right to manage its own business and affairs, for that it not only purports to require defendant to use electricity in lighting the headlights on the engines, to the exclusion of oil, acetylene or other substance, but requires it to use a given power of electricity.

(*i*) It deprived defendant of the right to manage its own property and business and affairs, and interferes with interstate commerce, because it requires defendant to adopt an unwise and disadvantageous management, in this that it requires all switch engines which go upon the main line after dark to be equipped with the electric headlight, whereas it is shown by uncontradicted
225 evidence that an electric headlight cannot be used without great danger and disadvantage upon a switch engine: And it is also shown that all of the yards of the defendant company in Georgia are divided by its main line, and none of its yards can be worked at night by a switch engine, unless that engine goes frequently upon said main line.

8. Because the court excluded the testimony of R. E. Smith under the following circumstances:

Said R. E. Smith qualified as an engineering expert, and was asked if he had ever made any actual examination of the cost of equipping and maintaining an electric headlight of the kind referred to in this case.

To which he replied that he had never made the actual test, but that he had studied a number of figures prepared by others, among which were reports of such tests and the cost of operating an electric headlight made by Mr. Curtis, Superintendent of Motive Power of the Louisville & Nashville Railroad and a similar officer of the Central Railroad;

That from an examination and study of these figures, and by applying his own experience to them, he concluded that the figures stated in these reports were reasonable, and that the annual cost of maintaining and operating an electric headlight would be between
226 $250 and $400, varying according to the condition of the apparatus, the price of coal and other similar conditions, to which the State objected on the ground that it was hearsay, and the court stated that the proper practice would be to ask the questions, to which the State would object and have it ruled out.

Whereupon the witness proceeded to say that he was not an electrical engineer, but that the cost of operating an electric headlight was a question of steam engineering, in which field he was an expert.

Thereupon, he was asked, in the presence of the jury:

"What figures has Mr. Curtis of the Louisville & Nashville about the maintainence and cost of the kind of electric headlight testified to here?"

To which question the State objected.

Thereupon, the defendant offered to show what it intended to prove by this witness, to which the court replied that that was the regular way,

Thereupon defendant's attorney stated to the court, that:

We expect to prove by this witness that he is in possession of a statement made by Mr. Thomas H. Curtis, superintendent of machinery of the Louisville & Nashville Railroad, in which Mr. Curtis gives figures showing that by actual tests an electric headlight operated for three hours and fifty minutes consumes 376 pounds
227 of coal and about 2335 pounds of water. From this it would appear that there was an evaporation of 16.18 pounds of water per pound of coal and a consumption of 607 pounds of water per hour. That this showed a consumption of 524 pounds of water per hour and six pounds of water evaporated per pound of coal. That assuming 30 days to the month and the use of two carbons per night at a cost of 1¾ cents per pair is 53 cents per month: that the waste is thirty cents and the polish 6 cents, and attention 15 hours in 30 days at 13½ cents per hour would be $2.02; repairs $1.00 per month. The proportion of the original cost is $1.66; coal consumed at $2.00 per ton, which is a very low estimate for Georgia and water at 6 cents per 1000 gallons. It shows coal consumed $18.34 and water consumed 79 cents, which makes the total cost of operat-

ing an electric headlight for a month is $24.70, or $296.40 per year. We are now proposing to show by the witness, who has qualified as an experienced man and as an expert in steam engineering, that these figures are reasonable, and that they are in accordance with his experience in the operation of steam making machinery.

To which the State objected on the ground that the same was hearsay, and, thereupon, the objection was sustained, and the evidence ruled out by the court.

228 Defendant says that the evidence was relevant, material, admissible, and not hearsay, and that it was competent to prove the same by the witness, and that it was error requiring the grant of a new trial to exclude such evidence.

9. Because said judgment of the court finding defendant guilty is contrary to law.

10. Because said judgment of the court finding defendant guilty is contrary to law, in that it is based on a void statute not passed as required by the Constitution of Georgia; or if the statute was properly passed, said statute was void because it deprives Defendant of its property without due process of law in violation of the 14th Amendment to the Constitution of the United States, and said statute materially and directly interferes with interstate commerce, in violation of the provision of the Constitution of the United States: that "Congress shall have power to regulate commerce between the States."

Wherefore the Atlantic Coast Line prays that its motion for a new trial, and amended motion for a new trial may be inquired into and that the court will set out the judgment and finding, and grant this defendant a new trial.

McDANIEL, ALSTON & BLACK,
J. R. LAMAR,
Att'ys for Atlantic Coast Line R. R.

229 The foregoing amended motion for a new trial read and examined. The recital of facts therein are true. Said amended motion is allowed and approved. Jan. 25, 1910.

WILLIAM F. EVE,
Judge City Court, R. C., Ga.

The brief of evidence filed in this cause having been approved and the motion for a new trial, and amended motion for a new trial having been allowed and approved, and the grounds of the said motion and amended motion having been read and considered:

It is after argument, ordered and adjudged that said motion for a new trial and amended motion for a new trial be, and the same is hereby overruled on each and every ground thereof.

Jan. 25, 1910.

WILLIAM F. EVE,
Judge City Court, R. C., Ga.

Filed in office Jan. 25, 1910
D. KERR, *D'p'y Clerk.*

230 STATE OF GEORGIA,
Richmond County:

I, William D'A. Walker, Clerk of the City Court of said County do hereby certify, that the foregoing 171 pages hereto attached, contain a true and complete transcript of such parts of the record as are specified in the Bill of Exceptions, and ordered by the presiding Judge to be transmitted to the Court of Appeals of Georgia, in the case of Atlantic Coast Line Railroad Company, Plaintiff in Error, vs. The State of Georgia, Defendant in Error.

I further certify that the City Court of said County, January Term, 1910 has not been finally adjourned.

Witness my official signature and the seal of said Court this 5 day of February, 1910.

[SEAL.] WM. D'A. WALKER,
Clerk City Court, Richmond County, Georgia.

231 (Endorsed:) Case No. 2444. Court of Appeals of Georgia. March Term 1910. Atlantic Coast Line R. Co. v. State. Transcript of Record. Filed in office Feb. 8, 1910. W. E. Talley, D. C. C. A. Ga.

232 Court of Appeals of the State of Georgia.

ATLANTA, *March* 15, 1910.

The Honorable Court of Appeals met pursuant to adjournment. The following order was passed:

Atlantic Coast Line Line Railroad Company v. The State.

It is ordered that the clerk of this court transmit to the Supreme Court a properly certified copy of the questions in this case upon which this court desires the instructions of the Supreme Court.

233 2444.

ATLANTIC COAST LINE RAILROAD COMPANY
v.
THE STATE.

The Court of Appeals desires the instruction of the Supreme Court as to the following questions necessary to the proper determination of said case:

1. Is what purports to be an act of the General Assembly, approved August 17, 1908, and found in the published Acts of 1908, pp. 50, 51, commonly known as the "headlight law" a law of this State, as against the specific contention presented in this case that it did not receive on its alleged passage a majority of the votes of all the members elected to the Senate, within the purview of and according to the provisions of art. 3, sec. 7, par. 14 of the constitution of this State (Civil Code 1895, §5777), and that it so affirmatively appears from the journals of the General Assembly, especially the

Senate journal for 1908, pp. 132, 163, 203, 204, 339, 340, 700 and 701? (If this question is answered in the negative, the further questions here propounded do not require an answer).

2. Is said act void as being in contravention of art. 1, sec. 1, par. 3 of the constitution of Georgia (Civil Code 1895, §5700), which provides: "No person shall be deprived of life, liberty or property, except by due process of law,"—as against the contention of the defendant [a railway corporation] "that the said enactment requires defendant to discontinue the use of property already furnish-
234 ing a sufficient and adequate head light; forces defendant to abandon the use of material adequate and sufficient for the production of safe and sufficient headlight; compels defendant to purchase expensive machinery for the purpose of generating a specific current of electricity as a means for lighting headlights, and compels defendant to purchase a reflector of a size designated by the statute,—thus not only depriving the defendant of the right to use property already owned, but compelling it to purchase property of a given description and depriving it of its own right to make contracts and manage its own business?"

3. Is said act void because it violates "the provisions of art. 1, sec. 1, par. 2, of the constitution of Georgia (Civil Code 1895, §5699) which provides that: 'Protection to person and property is the paramount duty of government, and shall be impartial and complete,' as against the contention that "the said act does not apply equally to all persons and corporations in the same class or similarly situated; said act makes an unreasonable and arbitrary classification, whereby it excludes from the operation of said act, persons owning and operating railroads, and likewise excludes from the operation of said act, receivers operating railroads, even though said receivers operate fast trains through cities, towns and thickly settled districts of the State; nor does said act apply to 'tram roads, mill roads, or roads engaged principally in lumber, or logging transportation in
235 connection with mills,' even though locomotives thereon for a whole or part of their route, may be operated at a fast schedule, and through thickly populated districts?"

4. Is said act void because it violates the provisions of the 14th amendment to the constitution of the United States, which provides that: "No State * * * shall deprive any person of life, liberty or property without due process of law" on the alleged ground "that the said act requires defendant to discontinue the use of property lawfully acquired and lawfully held, although furnishing sufficient and adequate headlight; forces defendant to abandon the use of lamps, reflectors, headlights and material lawfully held, although adequate and sufficient for the production of safe and sufficient headlight and reasonably adapted to the protection of person and property, whether on the track or on the locomotive and cars; compels defendant to purchase expensive machinery for the purpose of generating a specific current of electricity and to purchase a reflector of a size designated by the statute, thereby depriving defendant of its right to make contracts and to manage its own business?"

5. Is said act void because it violates the provisions of the 14th amendment to the constitution of the United States which declares: "No State * * * shall deny to any person within its jurisdiction, the equal protection of the laws," on the alleged ground "that the said headlight law does not apply equally to all persons
236 and corporations in the same class or similarly situated; said act makes an unreasonable and arbitrary classification, whereby it excludes from the operation of said act, persons owning and operating railroads and likewise excludes from the operation of said act, receivers operating railroads, even though said receivers operate fast trains through cities, towns, and thickly settled districts of the State; nor does said act apply to tram roads, mill roads, or roads engaged principally in lumber or logging transportation in connection with mills—even though the locomotives used thereon for a whole or part of their route, may be operated at fast speed, and through thickly populated districts?"

6. Is said act void because repugnant to art. 1, sec. 8, par. 3 of the constitution of the United States, which provides that: "Congress shall have power to regulate commerce with foreign nations, among the States and with the Indian tribes,"—on the alleged ground "that the enforcement of said statute and said statute itself interferes with and regulates interstate commerce; hinders and delays the running of locomotives having no such headlight as is required by said statute, although said locomotives are lawfully engaged in hauling cars and trains for interstate commerce; make it unlawful for defendant or other companies operating interstate railways, to use, in the State of Georgia, locomotives having no headlight of the kind described in said alleged enactment, al-
237 though said locomotives are lawfully used up to the State line—all with the result of delaying interstate commerce and rendering it impossible for interstate railroad companies crossing the Georgia line, to conduct their interstate business with usual, customary and proper dispatch?"

7. The plaintiff in error contends that the act in question was never passed by both houses of the General Assembly, according to the method prescribed in the constitution and set out in the 1st question above; the specific contention being that it passed the lower house regularly in the form now appearing in the printed acts; that in the Senate, the committee to which it was referred, reported adversely to the passage of the bill; that the Senate disagreed to the report of the committee and the bill went to second reading; that at the third reading a substitute was offered and adopted; the bill then passed by substitute, forty senators voting for it in this shape; the bill was transmitted to the House for concurrence in the substitute; the House refused to concur; thereafter, the Senate took up the bill for the purpose of receding from the substitute; the motion to recede prevailed by a vote of 18 to 12. No further action appears. The defendant at the trial in the court below offered to set up by special plea in bar that the substitute passed by the Senate was materially different in its provisions from the bill as

passed by the House, and to prove this fact by the exhibition
238 and introduction in evidence of a certified copy of the substitute as filed in the office of the Secretary of State. Was the special plea setting up this fact subject to be stricken on general demurrer thereto, and was the certified copy of the substitute admissible in evidence for the purpose of supplementing, varying or explaining the entries in the journal of the Senate, and would it, if it had been admitted and had been established that the bill as passed in the Senate by substitute was materially different from what it was as originally passed by the lower house, have impeached the validity of the act, under the circumstances recited above?

8. It appears from the record that the defendant was engaged in interstate commerce; that it failed to equip one of its locomotives engaged in that interstate commerce with a headlight of the standard required by the act in question. Was the defendant, as to this locomotive while so engaged in interstate commerce (it being run partly in this State and partly in South Carolina), exempt from the provisions of the act, on the ground that to apply the law to the operation of this locomotive as so engaged would be violative of the provision of the constitution of the United States quoted above, conferring upon Congress exclusive power to regulate interstate commerce?

9. Where it appears from the proof that the defendant's locomotives were prior to the passage of the act, equipped with oil-burning headlights, or with electric headlights different from that pre-
239 scribed by the act in question, is it any defense to a prosecution under the act that these headlights have in the experience of the defendants and other railroad companies usually proved reasonably safe and efficient (there being proof, however, that headlights of the prescribed standard are more efficient), and that to substitute electric headlights of the standard prescribed would entail expense of greater or less amount; the contention of the defendant being that to enforce the act under the circumstances would amount to depriving the defendant of its property without due process of law, in violation of the 14th amendment to the constitution of the United States and in violation of art. 1, sec. 1, par. 3 of the constitution of this State; because it renders the value of the old headlights less or totally destroys it and entails upon the defendant the expenditure of large sums of money; and deprives the defendant of the right to regulate its own business and affairs and causes it to submit to an arbitrary and unreasonable regulation thereof?

Wherefore, it is ordered that a certified copy of these questions together with the bill of exceptions and record be transmitted to the Supreme Court by the clerk of this court.

240 135.

No. 4. Certified.

ATLANTIC COAST LINE RAILROAD CO.
v.
THE STATE.

By the COURT:

1. A duly enrolled act, properly authenticated by the regular presiding officers of both houses of the General Assembly, approved by the Governor, and deposited with the Secretary of State as an existing law, will be conclusively presumed to have been enacted in accordance with the constitutional requirements; and it is not permissible to show by the legislative journals, or other records, that it did not receive on its passage a majority vote of all the members elected to each house, or that there was any irregularity in its enactment.

2. An act provided "That all railroad companies are hereby required to equip and maintain each and every locomotive used by such company to run on its main line after dark with a good and sufficient headlight which shall consume not less than three hundred watts at the arc, and with reflector not less than twenty-three inches in diameter, and to keep the same in good condition." It also provided that "any railroad company violating this act in any respect" should be liable to indictment and a prescribed punishment,
241 and that "This act shall not apply to tram-roads, mill-roads, and roads engaged principally in lumber or logging transportation in connection with mills." Held:

(*a*) The term "railroad company" employed in the act includes natural persons as well as corporations.

(*b*) The act is not void as bing violative of the equal protection clauses of the State and Federal constitutions because it exempts from its operation tram-roads, mill-roads, and roads engaged principally in lumber or logging transportation in connection with mills.

(*c*) Even if receivers of railroads are not within the operation of the act, it would not for this reason be violative of the equal protection clauses referred to in the preceding note.

3. The act does not violate the due process clauses of the State and Federal constitutions because its enforcement will require a loss of property to the defendant in doing away with the headlights on locomotives now in use and cause the defendant to incur expense in equipping its locomotives with the headlights required by the act.

(*a*) The act is not violative of the "due process" clauses of the State and Federal constitutions because it requires an arc electric headlight which shall consume "not less than three hundred watts at the arc and with a reflector not less than twenty-three inches in diameter," on the ground that it deprives the defendant "of
242 its own right to make contracts and manage its own business."

(*b*) The act was passed in the legitimate exercise of the police power of the State, and is not void on the ground that its requirements are unreasonable.

(c) Nor does the act violate the "due process" clauses of the State and Federal Constitutions on the ground that it contains no emergency clause, and absolutely and without exception makes the railroad company guilty of a crime if it operated one of its engines on its main line after dark without the required headlight.

4. The act does not violate the "commerce clause" of the Federal constitution on the ground that it would require at the State line a change of headlights on locomotives doing an interstate business if other States required headlights of a kind different from that prescribed by the act in question, although such change might involve some loss of time and expense on the part of the railroad company.

The Court of Appeals certified to this court for its instruction thereon the following questions of law, the determination of which is deemed necessary to a proper decision of the above stated case.

"1. Is what purports to be an act of the General Assembly, approved August 17, 1908, and found in the published Acts of
243 1908, pp. 50, 51, commonly known as the "headlight law," a law of this State as against the specific contention presented in this case that it did not receive on its alleged passage a majority of the votes of all the members elected to the Senate, within the purview of and according to the provisions of art. 3, sec. 7, par. 14 of the constitution of this State (Civil Code 1895, §5777), and that it so affirmatively appears from the journals of the General Assembly, especially the Senate journal for 1908, pp. 132, 163, 203, 204, 339, 340, 700 and 701?

"2. Is said act void as being in contravention of art. 1, sec. 1, par. 3, of the constitution of Georgia, (Civil Code 1895, §5700), which provides: 'No person shall be deprived of life, liberty or property, except by due process of law,' as against the contention of the defendant [a railway corporation] 'that the said enactment requires defendant to discontinue the use of property already furnishing a sufficient and adequate headlight, forces defendant to abandon the use of material adequate and sufficient for the production of safe and sufficient headlight, compels defendant to purchase expensive machinery for the purpose of generating a specific current of electricity as means for lighting headlights, and compels defendant to purchase a reflector of a size designated by the statute, thus not only depriving the defendant of the right to use property already owned, but compelling it to purchase property of a given de-
244 scription and depriving it of its own right to make contracts and manage its own business?

3. Is said act void because it violates the provisions of art. 1, sec. 1, par. 2 of the constitution of Georgia (Civil Code 1895, §5699) which provides that 'Protection to person and property is the paramount duty of government, and shall be impartial and complete,' as against the contention that "the said act does not apply equally to all persons and corporations in the same class or similarly situated; said act makes an unreasonable and arbitrary classification, whereby it excludes from the operation of said act persons owning and operating railroads, and likewise excludes from the operation

of said act receivers operating railroads, even though said receivers operate fast trains through cities, towns, and thickly settled districts of the State; nor does said act apply to 'tram-roads, mill-roads, or roads engaged principally in lumber or logging transportation in connection with mills,' even though locomotives thereon for a whole or a part of their route, may be operated at a fast schedule, and through thickly populated districts?

"4. Is said act void because it violates the provisions of the 14th amendment to the constitution of the United States, which provides that "No States * * * shall deprive any person of life, liberty or property without due process of law" on the alleged ground 'that the said act requires defendant to discontinue the use of
245 property lawfully acquired and lawfully held, although furnishing sufficient and adequate headlight; forces defendant to abandon the use of lamps, reflectors, headlights and material lawfully held, although adequate and sufficient for the production of safe and sufficient headlight and reasonably adapted to the protection of person and property, whether on the track or on the locomotive and cars; compels defendant to purchase expensive machinery for the purpose of generating a specific current of electricity, and to purchase a reflector of a size designated by the statute, thereby depriving defendant of its right to make contracts and to manage its own business?

"5. Is said act void because it violates the provisions of the 14th amendment to the constitution of the United States, which declares: "No State * * * shall deny to any person within its jurisdiction the equal protection of the laws," on the alleged ground "that the said headlight law does not apply equally to all persons and corporations in the same class or similarly situated; said act makes an unreasonable and arbitrary classification, whereby it excludes from the operation of said act persons owning and operating railroads, and likewise excludes from the operation of said act receivers operating railroads, even though said receivers operate fast trains through cities, towns, and thickly settled districts of the State; nor does said act apply to tram-roads, mill-roads, or roads engaged
246 principally in lumber or logging transportation in connection with mills, even though the locomotives used thereon, for a whole or part of their route, may be operated at fast speed and through thickly populated districts?

"6. Is said act void because repugnant to art. 1, sec. 8, par. 3 of the constitution of the United States, which provides that: "Congress shall have power to regulate commerce with foreign nations, among the States and with the Indian tribes," on the alleged ground "that the enforcement of said statute and said statute itself interferes with and regulates interstate commerce; hinders and delays the running of locomotives having no such headlight as is required by said statute, although said locomotives are lawfully engaged in hauling cars and trains for interstate commerce; makes it unlawful for defendant or other companies operating interstate railways to use, in the State of Georgia, locomotives having no headlight of the kind described in said alleged enactment, although said locomotives are

lawfully used up to the State line—all with the result of delaying interstate commerce and rendering it impossible for interstate railroad companies, crossing the Georgia line, to conduct their interstate business with usual, customary, and proper dispatch?

"7. The plaintiff in error contends that the act in question was never passed by both houses of the General Assembly, according to the method prescribed in the constitution and set out in the 1st question above; the specific contention being: that it passed
247 the lower house regularly in the form now appearing in the printed acts; that in the Senate, the committee to which it was referred reported adversely to the passage of the bill; that the Senate disagreed to the report of the committee, and the bill went to second reading, that at the third reading a substitute was offered and adopted, the bill then passed by substitute, forty senators voting for it in this shape; the bill was transmitted to the House for concurrence in the substitute; the House refused to concur; thereafter the Senate took up the bill for the purpose of receding from the substitute; the motion to recede prevailed by a vote of 18 to 12. No further action appears. The defendant at the trial in the court below offered to set up, by special plea in bar, that the substitute passed by the Senate was materially different in its provisions from the bill as passed by the House, and to prove this fact by the exhibition and introduction in evidence of a certified copy of the substitute as filed in the office of the Secretary of State. Was the special plea setting up this fact subject to be stricken on general demurrer thereto; and was the certified copy of the substitute admissible in evidence for the purpose of supplementing, varying, or explaining the entries in the journal of the Senate; and would it, if it had been admitted and had been established that the bill as passed in the Senate by substitute was materially different from what it was as originally passed by the lower house, have impeached the
248 validity of the act, under the circumstances recited above?

"8. It appears from the record that the defendant was engaged in interstate commerce; that it failed to equip one of its locomotives engaged in that interstate commerce with a headlight of the standard required by the act in question. Was the defendant, as to this locomotive while so engaged in interstate commerce (it being run partly in this State and partly in South Carolina), exempt from the provisions of the act, on the ground that to apply the law to the operation of this locomotive as so engaged would be violative of the provision of the constitution of the United States quoted above, conferring upon Congress exclusive power to regulate interstate commerce?

"9. Where it appears from the proof that the defendant's locomotives were, prior to the passage of the act, equipped with oil-burning headlights, or with electric headlights different from that prescribed by the act in question, is it any defense to a prosecution under the act that these headlights have, in the experience of the defendants and other railroad companies, usually proved reasonably safe and efficient (there being proof, however, that headlights of the prescribed standard are more efficient), and that to substitute

electric headlights of the standard prescribed would entail expense of greater or less amount; the contention of the defendant being that to enforce the act under the circumstances would amount to depriving the defendant of its property without due process of law,
249 in violation of the 14th amendment to the constitution of the United States and in violation of art. 1, sec. 1, par. 3 of the constitution of this State, because it renders the value of the old headlights less or totally destroys it, and entails upon the defendant the expenditure of large sums of money, and deprives the defendant of the right to regulate its own business and affairs, and causes it to submit to an arbitrary and unreasonable regulation thereof?"

HOLDEN, *J.*:

1. The act referred to in the question propounded by the Court of Appeals, known as the "headlight law," was duly deposited in the office of the Secretary of State as an enrolled act of the General Assembly, after having been duly signed by the President of the Senate and the speaker of the House of Representatives, and approved by the Governor. The provision of the constitution referred to in the 1st question propounded is as follows: "No bill shall become a law unless it shall receive a majority of the votes of all the members elected to each house of the General Assembly, and it shall, in every instance, so appear on the journal." Civil Code, §5777. An act with the status above named can not be attacked as being invalid, under the constitutional provision above quoted, by
250 showing that the journal of the Senate affirmatively shows that it did not receive on its passage the vote of a majority of all of the members elected to that body. When an enrolled act is signed by the presiding officers of both houses, approved by the Governor, and deposited in the office of the Secretary of State, it will be conclusively presumed that the measure was properly put to a vote in both houses, and that it received a constitutional majority; and the court will not upset the act because the journals of the houses happen to show that it did not receive a majority of the votes of either, or both branches of the legislature. 36 Cyc. 971 (G, b). The presiding officer of each branch of the General Assembly, and the Governor, are sworn officers of the State, and it is to be presumed that an enrolled act would not have been signed by these officials and thereby authenticated as being a valid law unless the act on its passage had received the number of votes which the constitution requires in order to enact it. It will be deemed more likely that the subordinate officers of the General Assembly, in the performance of clerical duties, should have made a mistake in recording on the journals the proceedings had by the respective legislative bodies, than that the sworn presiding officers of these bodies should have signed a duly enrolled act as having been lawfully enacted when it did not in fact receive the number of votes required by the constitution in order to insure its passage. In the
251 case of De Loach v. Newton, 134 Ga. 739 (68 S. E. 708), it was held: "If an enrolled act of the legislature was duly

signed by the president of the Senate and the speaker of the House and approved by the Governor and deposited in the office of the Secretary of State, it was not competent to attack its validity on the ground that the legislative journals showed that the bill originated in the House, was there passed by a constitution- majority, and transmitted to the Senate, where it was amended and passed by a constitutional majority, and then transmitted to the House, where the Senate amendment was concurred in, but failed to show that this was done by a constitutional majority." See also Whitley v. State, 134 Ga. 758.

If an act is not invalid under the provisions of the constitution above quoted when the legislative journals fail to show that it received a constitutional majority, it would not be invalid when the journals affirmatively show that it did not receive such majority. If it were permissive to look to the legislative journals to ascertain what occurred with respect to the passage of an act, after it had been duly enrolled, signed, approved and deposited with the Secretary of State as an existing law, an affirmative showing on the journal that a measure did not receive the requisite constitutional majority would be no more fatal to the validity of the act than a failure of the journal to show that it did receive such majority,
252 where the attack is based on a constitutional provision that no bill shall become a law unless it shall receive a majority of the voters of all the members elected to each house of the General Assembly, "and it shall, in every instance, so appear on the journal."

The 1st question propounded by the Court of Appeals must be answered in the affirmative. In answering this question, having ruled that an enrolled act duly signed by the presiding officers of both houses, approved by the Governor, and deposited with the Secretary of State is conclusively presumed to be a valid law so far as its enactment is concerned, the special plea referred to in the 7th question was subject to be stricken on the general demurrer thereto, and the certified copy of the substitute referred to in the 7th question was not admissible in evidence "for the purpose of supplementing, varying, or explaining the entries in the journal of the Senate." This ruling makes it unnecessary to determine whether or not the journal of the Senate shows that the act in question was, or was not, in fact passed in conformity to the above quoted provision of the constitution.

2. The full text of the title and the body of the act referred to in the questions propounded to us is as follows: "An act to require all railway companies in the State to equip and maintain each and every locomotive used with sufficient electric headlight, to
253 prescribe a punishment for the failure to so equip, and for other purposes.

"SECTION 1. Be it enacted by the General Assembly of Georgia, and it is hereby enacted by authority of the same, that all railroad companies are hereby required to equip and maintain each and every locomotive used by such company to run on its main line after dark with a good and sufficient headlight which shall consume not less than three hundred watts at the arc, and with a reflector not less

than twenty-three inches in diameter, and to keep the same in good condition. The word main line as used herein means all portions of the railway line not used solely as yards, spurs, and sidetracks.

SEC. 2. Be it further enacted, that any railroad company violating this act in any respect shall be liable to indictment as for a misdemeanor in any county in which the locomotive not so equipped and maintained may be run, and on conviction shall be punished by fine as prescribed in §1039 of the Code of 1895.

SEC. 3. Be it further enacted, that this act shall go into effect July 1, 1909.

SEC. 4. Provided, this act shall not apply to tramroads, mill-roads, and roads engaged principally in lumber or logging transportation in connection with mills.

SEC. 5. Be it further enacted, that all laws and parts of laws in conflict with this act be and the same are hereby repealed.

254 The act requires "all railroad companies" to equip every locomotive used by "such company to run on its main line" after dark with a light of the kind named, and provides that "any railroad company" violating the act shall be liable to indictment and to be punished by fine as prescribed in the Penal Code, §1039. Does the term "railroad company" include a natural person, so that the latter would be subject to indictment if such natural person owned and operated a railroad and failed to comply with the provisions of the act? In constructing the term "railroad company," we should look to all the provisions of the act and give proper consideration to the object intended to be accomplished by the act. Section 4 of the act provides: "Provided this act shall not apply to tramroads, mill-roads, and roads engaged principally in lumber or logging transportation in connection with mills." It should be observed that in making this exception the act does not say that the owner or operator of the roads designated should be excepted, but simply provides that "this act" shall not apply to such "roads," indicating that the purpose of the act was to make the requirement in reference to the use of the named headlights on all other railroads, regardless of whether owned by a corporation or natural persons. The evident purpose was to except certain roads, but not to make any exception in favor of any particular owners of other roads.

255 The object of the act was to require certain headlights on all railroads except those of a named class, and the term "railroad company" was intended to include natural persons as well as corporations. The word "company" does not necessarily mean a corporation. It may mean a firm or partnership. 8 Cyc. 389. If it includes a firm or partnership of two or more individuals, why should it not include one individual? Penal Code, §1, par. 4 provides: "the singular or plural number shall each include the other, unless expressly excluded." Penal laws should be construed strictly, but they should not be so construed as to defeat the obvious intention of the General Assembly. In construing an act, whether of a civil or penal nature, the intention of the General Assembly should be sought for, keeping in view the evil and the remedy. The evil against which protection is sought is the operation of engines

without the headlight required by the act. The purpose of the law was to require named headlights on engines on the main line of all railroads except those of a specified character, and it was not the intention to make this requirement of corporations and companies, and make no such requirement of an individual owning and operating a railroad. The Civil Code, sec. 2199, provides that the terms railroad "corporation" and "company", used in the article in which such section appears, shall include in their meaning any individual or individuals owning and operating railroads. Much of the law of this State pertaining to the operation of railroads, including the right of condemnation of private property, what is familiarly known as the "blow post" law, requirements
256 as to the furnishing of heat and light in railroad trains, are embraced in this article. We think the word "company" in the act in question was used in the sense referred to in the Civil Code, 2199, as including "individuals." In this connection, see State v. Stone, (—) 40 Am. St. 388; Chicago &c. Co. v. Garrity, 115 Ill. 155; Lewis v. Northern Pacific Ry. Co., (—) 92 Pac. 469; Singer Mfg. Co. v. Wright, 97 Ga. 114.

The act does not violate the equal-protection clauses of the State and Federal constitutions because it provides: "provided this act shall not apply to tramroads, mill-roads and roads engaged principally in lumber or logging transportation in connection with mills." The roads to which the act does not apply do not serve the public generally, but their work is mainly that connected with lumber mills. Their principal business is not the transportation of passengers and freight for the public, but involves work for private enterprises in a small territory. The danger of operating such roads without proper safety appliances is not so great as that attending the operation of ordinary railroads doing a general passenger and freight business for the public. These differences furnish a reasonable basis for requiring a headlight of a certain kind on engines on main lines on ordinary railroads, and not requiring such lights on engines on roads of the kind excepted. The latter form an entirely separate and distinct class of railroads from the
257 former, and the act can not be said to make an arbitrary classification. N. Y. &c. R. Co. v. New York, 165 N. Y. 628; Missouri &c. R. Co. v. State, 121 S. W. 930; People v. N. Y. &c. R. Co., 8 N. Y. S. 673; Chicago &c. Ry. Co. v. Railroad Commissioners, Ind. (90 N. E. 1011).

Conceding without deciding, that receivers of railroads are not within the provisions of the act, we do not think this fact would make the act void as a violation of the equal-protection clauses of the State and Federal constitutions. A receiver appointed by a court is one of its officers; and in the absence of any statute imposing a duty on a receiver of a railroad thus appointed, he must handle the property placed in his charge in accordance with the instructions of the court appointing him. His possession and operation of the road are those of the court. Should the court, through its receiver, have possession of a railroad whose engines were not equipped with the required headlight, or purchase other engines, the

presumption is that the court—a branch of the government co-ordinate with the General Assembly—would conform to the policy of the State as declared by the General Assembly, in the exercise of the police power, and equip the engines with such headlights as it had by law required of railroad companies. A railroad is never retained possession of and operated by the court longer than is necessary. The court does not permanently operate railroads; on the contrary, it only operates them for a short time from necessity. If the act applies to a receiver, and if a receiver were appointed by the court for a railroad whose engines were not equipped with the required headlights, how could such receiver operate the engines without such lights without subjecting himself to the numerous prosecutions and fines should the court require him to operate the engines in violation of the penal laws of the State? If it were a railroad engaged in serving the public, the latter might suffer to a great extent if the road was not operated until all the engines were equipped with the required headlights. The act provided that it should not go into effect until a specified date, and thus time was given to railroad companies to equip their engines in accordance with its provisions. But after the act went into effect, if a receiver were appointed for a railroad whose engines were not thus equipped, no time is allowed within which the receiver might comply with the act; and if the act applies to receivers, they would become subject to criminal prosecutions the day they were appointed if they operated engines without the prescribed equipment in disregard of the act. The court would dispose of a railroad under receivership as soon as it was proper and practicable to do so. Those to whom the receiver delivered it, under a contract of purchase or otherwise, would be subject to numerous prosecutions under the act in question should they not equip the engines as required by that law, and the public might seriously suffer if the road should cease operations until its engines could be thus equipped.

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It is to be presumed that the court would not allow the road to be disposed of before its engines were equipped with headlights as required by the act. It is not to be presumed that it would dispose of the road to another when it was in such condition that the one acquiring it would violate the penal law of the State by immediately operating it. Receivers, and courts through receivers, do not construct or buy railroads, but their ultimate aim is to get rid of the ones of which they are in possession. Courts, through receivers, never operate railroads except from necessity; and when they do so operate them, it is only for a limited time. If the court takes possession of a road whose engines are not equipped as required by the "headlight law", the court should not require its receiver to cease operating the road until the engines should be so equipped, thereby causing inconvenience and suffering to the public. In such cases the court should yield to the necessity of the situation as it existed when thrust upon it, by immediately operating the road, where possible, to subserve the public convenience and requirements, and impose upon the receiver the duty of equipping the engines as rapidly as possible in accordance with the policy of the

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law; so as to put the road in a condition where its operation can be continued by those who take charge of it when disposed of by the court without involving a violation of law on their part. We think there was a reasonable basis for a requirement that railroad
260 companies should equip their engines operated on main lines as prescribed in the act without making such requirement applicable to receivers of railroads. The answer to the 3rd and 5th questions must be in the negative.

3. All property is held subject to the police power of the State. The determination by the railroad company that the reflector and the light in use by it constituted an adequate light cannot be conclusive on the General Assembly, which has the authority to exercise the police power of the State and in the interest of public safety to declare it inadequate. It is a matter of great importance for the protection of persons and property in the train attached to a locomotive, the persons on the locomotive, persons and property on the track, and persons and property on other trains with which a collision may be had, that there should be an adequate headlight on such locomotive. The General Assembly, in the exercise of the police power of the State, has the right to require adequate headlights on such engines; and if in conformity to the requirements of such law the railroad company is compelled to do away with the headlights already in use by it and substitute others therefor at its own expense, there is no taking of property without just compensation in violation of the due process clauses of the State and Federal constitutions. In such a case, there is no taking of property. The due process clauses are not intended to limit the right of the State to properly
261 exercise the police power in the enhancement of the public safety. The fact that the railroad company will, in order to equip its engines with the required headlights, be forced to do away with the reflectors and lights which it has in use is only incidental to a compliance with the police regulation and requirement made in the act, which is a valid and reasonable requirement. Damages cannot be recovered by one because he incurs expense in obeying a police regulation enacted for the common welfare and safety of the public. See, in this connection, State v. St. Paul etc. Ry. Co., 8 Am. & Eng. Ann. Cases, 1047; 1 Thompson, Corp. § 449; C., B. & Q. R. Co. v. Chicago, 166 U. S. 226; C., B. & Q. Ry. v. Drainage Commissioners, 200 U. S. 561, and authorities cited in the opinion; Bacon v. Boston & M. R. R. (——), 76 Atl. 128 (19). The act provides that every engine used on a main line after dark shall be equipped "with a good and sufficient headlight, which shall consume not less than 300 watts at the arc, and with a reflector not less than 23 inches in diameter." It is not required that the light shall consume no more than the specified number of watts at the arc, nor that the reflector shall be exactly a particular size. A light consuming more than 300 watts at the arc, and a reflector greater than 23 inches in diameter would be within the provisions of the act. The act requires "a good and sufficient headlight." In the exercise of the police power the General Assembly had the right to prescribe that such light should be
262 an electric light. The fact that the railway company is prevented from providing a light produced in some way other

than by an electric current is no violation of the due process clause "by depriving it of its own right to make contracts and manage its own business." In McGehee on Due Process of Law, 345, it is said: "Although freedom and the liberty to contract are fundamental rights within the guaranties of the constitution, they may be limited by the State in the exercise of the police power in the interest of the public safety, health or morals, or, under certain conditions, in the exercise of the legislative power merely." Also see Freund on Police Power, § 499. It is to be presumed that the General Assembly satisfied itself that the light proper to be used in order to insure the public safety was the one required, and in the exercise of the police power it had the right to require the use of such light. The fact that in obeying the law the railroad company is deprived of the right to use a light other than an electric headlight, or to use an electric light below a specified intensity, or a reflector of less than a designated size, does not violate the due process clause of the State and Federal constitutions. The legislature has the power to require such a headlight as is best promotive of the public safety, if the requirement is a reasonable one. An act requiring in general terms a light adequate for such purposes would be very indefinite and would give rise to frequent disputes as
263 to whether or not the law had been observed. A jury in one instance might declare the light in use inadequate while another jury might declare it adequate, and the user of the light might be uncertain as to whether or not he was complying with the law. In Atchison &c. Railroad Co. v. Matthews, 174 U. S. 96, 102, the Supreme Court of the United States said: "If, in order to accomplish a given beneficial result—a result which depends on the action of a corporation—the legislature has the power to prescribe a specific duty and punish a failure to comply therewith by a penalty, either double damages or attorney's fees, has it not equal power to prescribe the same penalty for failing to accomplish the same result, leaving to the corporation the selection of the means it deems best therefor? Does the power of the legislature depend on the method it pursues to accomplish the result? As individuals we may think it better that the legislature prescribe the specific duties which the corporation must perform; we may think it better that the legislation should be like that of Missouri, prescribing an absolute liability, instead of that of Kansas, making the fact of fire prima facie evidence of negligence; but clearly as a court we may not interpose our personal views as to the wisdom or policy of either form of legislation. It cannot be too often said that forms are matters of legislative consideration; results and power only are to be considered by the courts." In Freund on Police Power, § 34, it is said: "As-
264 suming that several measures are equally efficient to avert danger to health or safety, it would still seem to be within the legislative power to select one method and require its adoption; for it is easier to enforce uniform police regulations than a great variety of measures, the efficiency of each of which would be a question of fact in each particular case." Requiring a light by virtue of which those on an engine can see a designated distance ahead is

practically done by requiring that the light shall be of a certain intensity and with a reflector of not less than a given size. The act declares that the light which is considered proper for the public safety must be of the kind required. The General Assembly is presumed to have acted after due deliberation and investigation, and after finding that the light proper for the public safety must be of the kind prescribed. The courts cannot say that an electric light, and one of the intensity provided, with a reflector of the size named, is not one necessary for the public safety; nor can we say that the requirement that such a light shall be used on locomotives is an unreasonable requirement, although the act in preventing the use of lights other than an electric light affects the right of the company to contract for any other kind of light. The act is not void for the alleged reason that the government is undertaking to manage the company's business and interfere with its rights to contract. In 1 Thompson on Corporations (2d ed.), § 425, it is
265 said: "The legislature may exercise its discretion within wide limits in its regulations of corporations under this police power. If the statute appears to be within the apparent scope of such power, it is not for the courts to inquire into its wisdom and policy, or to substitute their discretion or judgment for that of the legislature. * * * The correct doctrine undoubtedly is that it is for the legislature to determine the exigency, or the occasion, for the exercise of this power; but it is clearly within the jurisdiction of the courts to determine what are the subjects upon which this power is to be exercised, and the reasonableness of that exercise." And in § 426, the same author says: "The position of the courts in passing on the validity of statutes enacted by the legislature in the exercise of this police power is regarded by them as both delicate and embarrassing. Courts should be, and are, slow to pronounce judgment upon what is purely legislative discretion. It is sufficient to stay the hands of the courts if the exercise of this power by the legislatures is reasonable. And in judging of its reasonableness courts will not look closely into mere matters of judgment where there may be a reasonable difference of opinion. The courts will assume that this power will always be exercised by the legislature with the highest discretion; and the rule is that where the legislative expression is clear and unequivocal, a clear case should be made to authorize an interference by the courts upon the ground of unreasonableness.
266 The courts should and do proceed with the utmost caution, and hold such regulations void only when they clearly pass beyond the limits of the police power and infringe upon rights secured by the Federal law. This power rests solely within the legislative discretion, inside constitutional limits. It is for the legislature to determine when the public safety or welfare requires the exercise of this power, and the courts can interfere only when such exercise conflicts with the constitution, with the necessity, wisdom or policy of such legislation they have nothing to do." The need for the exercise of the police power upon any given subject is a matter in the discretion of the legislature. The exercise of this power must be reasonable, and the question as to whether or not it is reasonable is one for the courts.

We cannot say that the exercise of the power in this instance was unreasonable. In Holden v. Hardy, 169 U. S. 366, 397, the following language of the Supreme Court of Utah was approved: "Though reasonable doubts may exist as to the power of the legislature to pass a law, or as to whether the law is calculated or adapted to promote the health, safety, or comfort of the people, or to secure good order or promote the general welfare, we must resolve them in favor of the right of that department of government." The legislature has the right to prevent railroad companies from contracting for and using a light not proper to be used for the public safety; and if the
267 light required is one proper for this purpose, the legislature has the right to require its use, notwithstanding this prevents the use of another kind of light, if the requirement of the act is reasonable,—and we cannot say that its requirements are unreasonable.

The act is not void on the ground that it absolutely and without exception makes the company guilty of a crime when it fails to equip its locomotives with the required headlights and operates them on its main line without such headlights. It is contended that the act is void for the reason that in case of accident or other unforseen cause, if the light which the company had provided in conformity with the requirements of the act were injured or destroyed, no provision is made allowing the company to operate its engine without the required headlight to a repair-shop, or to the place where another engine could be obtained, without violating the act and becoming liable to punishment thereunder. Every statute must be construed to have a reasonable intendment, and be construed in connection with other statutes. While we will not undertake to detail instances in which the company would be guilty of no offense under the act in question while operating an engine without the required headlight, an act will not be construed so as to require the performance of an impossible act, if any other construction can be legitimately given it. See Sou. Ry. Co. v. Atlanta Sand Co. 135 Ga. 35 (68 S. E. 807). The statutes requiring railroad companies to
268 erect blow-posts 400 yards on either side of public crossings and to blow the whistle on approaching such crossings, to furnish light and water for passengers, and other statutes imposing duties on railroad companies, and providing a penalty for violation thereof, contain no emergency clauses; and there are many statutes making the commission of specific acts crimes without providing that there are circumstances under which a technical violation of the letter of the act would constitute no crime; but we are not prepared to hold that such acts are void for this reason. As to whether in any particular instance a person charged with violating a criminal statute has a good defense thereto must depend upon the particular facts in each case. We do not think that the act is violative of the due process clauses of the State and Federal constitutions; and our answer to the 2d, 4th and 9th questions must be in the negative.

4. The commerce clause of the Federal constitution is a limitation on, but is not a destruction of, the police power of the States. The police power has never been surrendered by the States. A railroad

company driving an engine engaged in interstate commerce through the territory of this State, with a headlight which endangers the lives and property of the people, can not claim that under the commerce clause of the Federal constitution it is not subject to reasonable police regulations of this State requiring an adequate headlight for the protection of the lives and property of the people.

269 The act in question does not restrict or prohibit interstate commerce. It is an exercise of the police power, designed to protect persons and property in this State, and does not prohibit or regulate interstate commerce. The Statute is not directed against interstate commerce; so far as the act affects interstate commerce, it is in aid thereof. It protects the persons and property on trains brought from another State into this State, as it also does persons and property not so brought; and it is the duty of the State to protect the former as well as the latter. One of the highest duties of government is the protection of the lives and property of the people. To the exercise of the police power all rights of natural persons and corporations are subject. If an engine doing an interstate business should come into this State from another State, or go out of this State into another State, when such other State had a law requiring a headlight on the engine other than an electric light and a reflector of a size different from that required by the act in question, the mere fact that this would necessitate changes of lights and reflectors, thereby causing expense, loss of time, and inconvenience, would not for this reason make the requirement of the act an unlawful interference with interstate commerce. People v. N. Y. &c. R. Co., 8 N. Y. S. 673; N. Y. &c. R. Co. v. New York, 165 U. S. 628. Many acts requiring trains doing an interstate business to stop at stations and public crossings, and to run at not exceeding a specified

270 rate of speed, have been held not to be violative of the commerce clause. Such acts, however, necessarily to some extent prevent such trains from making the time they would make but for such stops and slowing up of speed, and also of necessity involve some expense. A violation of the commerce clause would not exist merely because some loss of time, expense, and inconvenience was caused the railroad company in making the necessary changes in its headlight equipment in order to meet the requirements of different States, nor because such changes involved some additional expense. Such expenses and loss of time would impose no substantial burden on interstate commerce. The act is in no sense a regulation of interstate commerce. If every law enacted in the exercise of the police power with a design to exhance the public safety be declared void because it to some extent affects interstate commerce, many of the most salutary police regulations of the States must fall. In C. & P. T. Co. v. Manning, 186 U. S. 238, it was declared: "Courts always presume that a legislature in enacting statutes acts advisedly and with full knowledge of the situation, and they must accept its action as that of a body having full power to act, and only acting when it has acquired sufficient information to justify its action." Every presumption is to be indulged in favor of the constitutionality of an act. There is no legislation by Congress making any

requirements with respect to the kind of headlights to be
271 used on engines in interstate business. The act in question is not violative of the commerce clause of the Federal Constitution; and our answer to the 6th and 8th questions is in the negative.
All the Justices concur.

CLERK'S OFFICE SUPREME COURT OF GEORGIA,
ATLANTA, *January 4th* 1911.

I hereby certify that the foregoing pages hereto attached contain a true and complete copy of the opinion of the Supreme Court of Georgia in the case therein stated, as appears from the original of file in this office.
Witness my signature and the seal of said court hereto affixed the day and year above written.
[SEAL.] Z. D. HARRISON, *Clerk*.

272 Supreme Court of the State of Georgia.

ATLANTA, *December* 16, 1910.

The Honorable Supreme Court met pursuant to adjournment. The following order was passed:

ATLANTIC COAST LINE R. CO.
v.
THE STATE.

This case came before this court upon questions certified by the Court of Appeals; upon consideration whereof it is ordered that the case be returned to that court with the instructions contained in the opinion this day filed.

Supreme Court of the State of Georgia.

CLERK'S OFFICE, *Atlanta, Jan.* 5, 1911.

I certify that the above is a true extract from the minutes of the Supreme Court of Georgia.
Witness my signature and the seal of said court affixed the day and year last above written.
[SEAL.] Z. D. HARRISON, *Clerk*.

273 (Endorsed:) Case No. 2444. Court of Appeals of Georgia. March Term, 1910. Atlantic Coast Line R. Co. v. The State. Instructions and Opinion of Supreme Court. Filed in Office January 5, 1911. Logan Bleckley, C. C. A. Ga.

274 81.

Case No. 2444.

Court of Appeals of Georgia.

ATLANTIC COAST LINE RAILROAD CO.
v.
THE STATE.

By the Court:

POWELL, *J.*: This case involves only questions as to the constitutionality of what is known as the "headlight act" of 1908. These questions have been certified to the Supreme Court, and by that tribunal have been answered, the holding being that the act is constitutional. 135 Ga. 545 (69 S. E. 725). The judgment of the trial court is therefore

Affirmed.

275 Court of Appeals of the State of Georgia.

ATLANTA, *January* 17, 1911.

The Honorable Court of Appeals met pursuant to adjournment. The following judgment was rendered:

ATLANTIC COAST LINE R. CO.
v.
THE STATE.

This case came before this court upon a writ of error from the city court of Richmond county; and, after argument had it is considered and adjudged that the judgment of the court below be affirmed.

276 Court of Appeals of the State of Georgia.

CLERK'S OFFICE, ATLANTA, *February* 10, 1911.

I hereby certify that the foregoing pages hereto attached contain the original writ of error, citation and acknowledgement of service, and a true copy of the entire record and proceedings in the case of Atlantic Coast Line Railroad Company v. The State of Georgia, transmitted to the Supreme Court of the United States pursuant to said writ of error, as appears from the records and files of this office.

Witness my signature and the seal of said court hereto affixed.

[Seal Court of Appeals of the State of Georgia, 1906.]

LOGAN BLECKLEY,
Clerk Court of Appeals of Georgia.

Endorsed on cover: File No. 22,530. Georgia Court of Appeals. Term No. 909. Atlantic Coast Line Railroad Company, plaintiff in error, vs. The State of Georgia. Filed February 17th, 1911. File No. 22,530.

Supreme Court of the United States

---------- TERM, 1911.

No. ------

MOTION TO ADVANCE.

ATLANTIC COAST LINE RAILROAD COMPANY, *Appellant,*

vs.

THE STATE OF GEORGIA, *Appellee.*

ON APPEAL FROM THE COURT OF APPEALS OF THE STATE OF GEORGIA.

The appellant, Atlantic Coast Line Railroad Company, was tried at the September term, 1909, of the City Court of Richmond county, State of Georgia, upon an accusation duly filed therein charging the said railroad company with a misdemeanor for that the said railroad company, in the county of Richmond, State of Georgia, on the 14th day of August, 1909, being then and there a railroad company operating a railroad in said county, did unlawfully fail and refuse to equip and maintain a certain locomotive known as No. 373, then and there used by said company to run on its main line after dark, with a

good and sufficient headlight which should consume not less than 300 Watts at the arc, and with a reflector not less than 23 inches in diameter, said main line then and there not being a portion of said railroad line used solely as a yard, spur or side-track, in violation of an Act of the General Assembly of the State of Georgia in substance as follows: "All railroad companies are required to equip and maintain on each and every locomotive used by such company to run on its main line after dark, with a good and sufficient headlight which shall consume not less than 300 Watts at the arc, and with a reflector not les than 23 inches in diameter, and to keep the same in good condition. The words "main line" as used herein, mean all portions of the railway line not used solely as yards, spurs and side-track," approved August 17, 1908. (Acts 1908, p. 50).

The case was heard before the judge of the City Court of Richmond county, sitting as a judge and jury, as provided for and allowed by the Act creating said court. The railway company before pleading to the merits filed a demurrer to the case which was overruled by the court. It then filed a plea in bar which was stricken by the court, to which rulings of the court, exceptions pendente lite were filed by the railroad company. After hearing evidence the railroad company was found guilty. A motion for new trial was duly made by the railroad company, which was overruled. An appeal was then taken to the Court of Appeals of the State of Georgia, where the judgment of the trial court was affirmed. From this judgment of the Court of Appeals this case has been brought by writ of error to this Court.

The railroad company insists that the Act of the Gen-

eral Assembly of the State of Georgia, under which said accusation was made, is unconstitutional and void in that it contravenes the Fourteenth Amendment of the Constitution of the United States of America, and is in violation of Article 1, Section 1, Clause 3 of the Constitution of the United States of America. The State of Georgia insists that said Act is valid and within the proper exercise of its police powers.

It is respectfully insisted that this cause should be advanced for the following reasons:

FIRST.

This case involves the contitutionality of a criminal statute of the State of Georgia, the enforcement of which is being held up and delayed pending the final determination of this cause.

SECOND.

Delay in the trial of this case brings discredit upon the administration of justice in the State of Georgia and impedes the proper enforcement of a salutary law designed for the public protection and safety.

THIRD.

To avoid a multiplicity of criminal prosecutions the State of Georgia agreed that this should be made a test case and the propriety of its early determination is thereby emphasized.

Respectfully submitted,

H. A. HALL,

Attorney for Appellee.

Supreme Court of the United States

---------- TERM, 1911.

No. ------

ATLANTIC COAST LINE RAILROAD COMPANY, *Appellant*,

vs.

THE STATE OF GEORGIA, *Appellee*.

ON APPEAL FROM THE COURT OF APPEALS OF THE STATE OF GEORGIA.

NOTICE OF MOTION TO ADVANCE.

To Alexander Hamilton, W. E. Kay, Sanders McDaniel, Robt. C. Alston, Eugene R. Black, Attorneys for Appellant, and to said Appellant:

Take notice, that I shall move the Supreme Court of the United States, at the court room of said Court in the city of Washington, D. C., on Monday the 22d day of May, next, at 11 o'clock in the forenoon, or as soon thereafter as counsel can be heard, to advance the above entitled cause for argument, and that upon such motion I shall present to the Court in support thereof the statement and reasons hereto annexed.

Respectfully,

H. A. HALL,

Attorney for Appellee.

Supreme Court of the United States

---------- TERM, 1911.

No. ------

ATLANTIC COAST LINE RAILROAD COMPANY, *Appellant,*
vs.
THE STATE OF GEORGIA, *Appellee.*

ON APPEAL FROM THE COURT OF APPEALS OF THE STATE OF GEORGIA.

GEORGIA,
FULTON COUNTY.

Due and legal service of the foregoing motion to advance acknowledged, copy, notice and all further notice and service waived.

This ------ day of May, 1911.

ALEXANDER HAMILTON,
W. E. KAY,
SANDERS MCDANIEL,
ROBT. C. ALSTON,
EUGENE R. BLACK,
Counsel for Appellant.

Supreme Court, U. S.
FILED.
MAR 14 1913
JAMES H. McKENNEY,
CLERK.

SUPREME COURT OF THE UNITED STATES

October Term, 1912.

No. 24

ATLANTIC COAST LINE RAILROAD COMPANY, - - - - - Plaintiff in Error,

versus

THE STATE OF GEORGIA,

In Error to the Court of Appeals of the State of Georgia.

Brief for Plaintiff in Error.

GEORGIA HEADLIGHT ACT.

1. This Act is violative of the Due Process, the Equal Protection, and the Commerce Clauses of the Constitution of the United States.

2. Congress by its Legislation has Pre-empted and Occupied the Field of Regulation of the same Subject-Matter, viz.: Safety Appliances on Locomotives and Cars used in Interstate Commerce, to the Exclusion of State Legislation.

HENRY L. STONE,
Attorney for Plaintiff in Error.

ALFRED P. THOM,
ALEXANDER HAMILTON,
ROBERT C. ALSTON,
Of Counsel.

WESTERFIELD-BONTE CO., INCORPORATED, LOUISVILLE, KY.

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SUPREME COURT OF THE UNITED STATES

October Term, 1912.

No. 222.

Atlantic Coast Line Railroad Company, - - - - - - - - Plaintiff in Error,

vs.

The State of Georgia,

In Error to the Court of Appeals of the State of Georgia.

BRIEF FOR PLAINTIFF IN ERROR.

GEORGIA HEADLIGHT ACT.

1. This Act is violative of the Due Process, the Equal Protection, and the Commerce Clauses of the Constitution of the United States.
2. Congress by its Legislation has Pre-empted and Occupied the Field of Regulation of the same Subject-Matter, viz.: Safety Appliances on Locomotives and Cars used in Interstate Commerce, to the Exclusion of State Legislation.

STATEMENT OF CASE.

On September 9, 1909, one Guy Sturgis made an affidavit before William F. Eve, judge of the city court of Richmond County, State of Georgia, that to the best

of his knowledge and belief the plaintiff in error, Atlantic Coast Line Railroad Company (hereinafter called the Railroad Company), a corporation doing business in said county and State, did on August 14, 1909, in the county aforesaid, commit a misdemeanor. On this affidavit said city court judge issued a warrant of arrest against the Railroad Company, and J. C. C. Black, Jr., solicitor of said city court, framed his charge, accusing the Railroad Company of having, in said county, on the date last mentioned, unlawfully failed and refused "to equip and maintain a certain locomotive, known as No. 373, then and there used by said company to run on its main line after dark, with a good and sufficient headlight which should consume not less than three hundred watts at the arc and with a reflector not less than twenty-three inches in diameter, said main line then and there not being a portion of said railway line used solely as a yard, spur or sidetrack, contrary to the laws of said State, the good order, peace, and dignity thereof." (R. 14, 15.)

To this accusation the Railroad Comapny on arraignment, and before pleading, demurred on several grounds, some of which assailed the validity of the statute known as the "Headlight Law" of Georgia (Published Laws 1908, pp. 50, 51) for alleged defects in the method of its passage through the Legislature, thus raising simply questions arising under the Constitution of that State, while on other grounds in its demurrer the Railroad Company claimed said statute was void because its provisions violated the due process, the equal protection,

and commerce clauses of the Constitution of the United States. The statute in question is as follows (R. 30):

> AN ACT to require all railway companies in the State to equip all locomotives used in service on main lines with sufficient electric headlight, to prescribe a punishment for the failure to so equip, and for other purposes.
>
> Section 1. Be it enacted by the General Assembly of Georgia, and it is hereby enacted by authority of the same, That all railroad companies are hereby required to equip and maintain each and every locomotive used by such company to run on its main line after dark with a good and sufficient headlight which shall consume not less than three hundred watts at the arc, and with a reflector not less than twenty-three inches in diameter, and to keep the same in good condition. The word main line as used herein means all portions of the railway line, not used solely as yards, spurs and sidetracks.
>
> Section 2. Be it further enacted that any railroad company violating this Act in any respect, shall be liable to indictment as for a misdemeanor in any county in which the locomotive not so equipped and maintained may run, and on conviction shall be punished by fine as prescribed in Section 1039 of the Code of 1895.
>
> Section 3. Be it further enacted that this Act shall go into effect July 1, 1909.
>
> Section 4. Provided this Act shall not apply to tram roads, mill roads and roads engaged principally in lumber or logging transportation in connection with mills.
>
> Section 5. Be it further enacted that all laws and parts of laws in conflict with this Act, be and the same are hereby repealed.

The grounds of the demurrer to the accusation, presenting the Federal questions involved on this writ of

error, are Nos. 5, 6, 7, 10, 11, and 12, as follows (R. 16-18):

5. Said Act known as the headlight law is void because it violates the provisions of the 14th Amendment to the Constitution of the United States which provides that: "No State shall deprive any person of life, liberty or property, without due process of law."

6. Said Act is void because it violates the provisions of the 14th Amendment of the Constitution of the United States which provides that: "No State shall deny to any person within its jurisdiction the equal protection of the laws."

7. Said Act is void—in contravention of Art. 1, Sec. 8, par. 3, of the Constitution of the United States, which provides that: "Congress shall have power to regulate commerce with foreign nations, among the States, and with Indian tribes."

10. Said Act is void because it violates the provisions of the 14th Amendment to the Constitution of the United States, which provides that: "No State shall deprive any person of life, liberty, or property without due process of law," in that the said Act requires defendant to discontinue the use of property lawfully acquired and lawfully held, although furnishing sufficient and adequate headlight; forces defendant to abandon the use of lamps, reflectors, headlights and material lawfully held, although adequate and sufficient for the production of safe and sufficient headlight and reasonably adapted to the protection of person and property, whether on the track or on the locomotive and cars; compels defendant to purchase expensive machinery for the purpose of generating a specific current of electricity and to purchase a reflector of a size designated by the statute, thereby depriving defendant of its right to make contracts and to manage its own business.

11. Said Act is void, because in violation of the provision of the 14th Amendment to the Constitution of the United States, which declares: "No State

shall deny to any person within its jurisdiction the equal protection of the laws," in that the said headlight law does not apply equally to all persons and corporations in the same class or similarly situated; said Act makes an unreasonable and arbitrary classification, whereby it excludes from the operation of said Act, persons owning and operating railroads and likewise excludes from the operation of said Act, receivers operating railroads, even though said receivers operate fast trains through cities, towns and thickly settled districts of the State; nor does said Act apply to tramroads, mill roads, or roads engaged principally in lumber or logging transportation in connection with mills—even through the locomotives used thereon for a whole or part of their route, may be operated at fast speed, and through thickly populated districts.

12. Because said Act commonly known as the headlight law is a direct and unreasonable interference with and regulation of interstate commerce, and the operation of trains used and operated in interstate commerce, in violation of Article 1, Sec. 8, and paragraph 3, of the Constitution of the United States, which provides that: "Congress shall have power to regulate commerce with foreign nations, among the States, and with the Indian tribes"—in that the enforcement of said statute and said statute itself interferes with and regulates interstate commerce; hinders and delays the running of locomotives having no such headlight as is required by said statute, although said locomotives are lawfully engaged in hauling cars and trains for interstate commerce; makes it unlawful for defendant or other companies operating interstate railroads, to use in the State of Georgia, locomotives having no headlight of the kind described in said alleged enactment, although said locomotives are lawfully used up to the State line—all with the result of delaying interstate commerce and rendering it impossible for interstate railroad

companies crossing the Georgia line, to conduct their interstate business with usual, customary, and proper dispatch.

The city court overruled said demurrer, and thereupon the railroad company waived a trial by jury and pleaded not guilty. That court then found the railroad company guilty of violating said "Headlight Law," and entered a judgment October 20, 1909, ordering it to pay a fine of two hundred and fifty ($250) dollars and the costs of the prosecution. (R. 33.)

The railroad company thereupon filed its motion and grounds for a new trial (R. 34), and afterward filed its amended motion and grounds therefor. Those portions of the latter, forming the basis of the Federal questions made herein, are as follows (R. 96-100):

Now comes the defendant, the Atlantic Coast Line Railroad, and amends its motion for new trial, already of file, by adding thereto the following grounds:

(1) Because it affirmatively appears from the uncontradicted and undisputed evidence that engine 373 mentioned in the accusation was, at the time mentioned in the accusation, engaged in hauling a train loaded with interstate freight and engaged in interstate commerce.

(2) Because it affirmatively appears from the uncontradicted evidence that engine 373 referred to in the accusation was, at the time referred to and covered by the accusation, used in hauling interstate freight, and the equipment and operation of said engine could not be subject to the operation of the Headlight Law without materially, immediately and directly interfering with interstate commerce, in violation of the provisions of the Constitution of the

United States, providing that Congress shall have power to regulate commerce between the States.

(3) Because it affirmatively appears from the uncontradicted evidence that the Headlight Law approved August 17, 1908, causes a direct, immediate, material and serious interference with the operation of said engine 373, so as aforesaid engaged in interstate commerce, and in the operation of other engines of this defendant likewise engaged in interstate commerce, in violation of the provisions of the Constitution of the United States, providing that Congress shall have power to regulate commerce between the States.

(4) Because it affirmatively appears that engine 373 referred to in the accusation was, at the time referred to in and covered by the accusation, used solely on a run to and from Augusta, Georgia, and Florence, South Carolina, a distance of 168 miles, of which 4½ miles is in the State of Georgia, and that engine 373, and all other engines of the defendant, were lawfully equipped with good, safe and sufficient headlights, and while said engine 373 and other engines of the defendant could lawfully make the run from Florence, South Carolina, to the Savannah River, when equipped with oil headlights, the said engine 373 and other engines of defendant used in interstate commerce, would, in order to complete the run of 4½ miles from the Savannah River to Augusta, Georgia, have to be equipped at great expense of time, labor and money with electric headlights, thereby hindering and delaying said locomotive and locomotives and trains engaged in interstate commerce in violation of the provision of the Constitution of the United States which provides that Congress shall have power to regulate commerce between the States.

(5) Because it affirmatively appears from the uncontradicted and undisputed evidence that engine 373 mentioned in the accusation, although not

equipped with the electric headlight and reflector of the kind and character referred to in the headlight law, was yet well and sufficiently equipped with a good and safe oil headlight of the kind and character long and generally used in the State of Georgia and in the South.

(6) That said oil headlight on engine 373 had been in practical use and operation extending over two or three years in the States of Georgia, North Carolina, South Carolina, Virginia, and that such practical use demonstrated that said oil headlight was safe, sufficient and adequately served the purpose for which a headlight is used on a locomotive, and that during said period in which said locomotive had been in use in said States, no loss or damage to person or property had ever resulted by reason of the fact that the oil headlight was not safe and entirely sufficient to accomplish the purpose for which headlights are used on locomotives hauling and operating cars over railroads:

(a) And that to require this defendant to remove and disuse said good, safe and sufficient oil headlight, and to substitute therefor an electric headlight and reflector required by the terms of said Headlight Law, would be to deprive defendant of its property without due process of law, in violation of the provisions of the 14th Amendment to the Constitution of the United States, and in further violation of Article 1, Section 1, Par. 3 of the Constitution of Georgia (Civil Code 5700) providing that no person shall be deprived of property without due process of law.

(7) Because it not only affirmatively appears that engine 373 referred to in the accusation was well and sufficiently equipped with a good, safe and sufficient headlight, safe and adequate for the purpose for which headlights are used on locomotives, but it also appears that the great majority of en-

gines in the South and in the State of Georgia are, and for many years past have been, equipped with oil headlights, and there is no evidence in the record of any case in which person or property has been damaged by reason of the fact that oil headlights were used. And to require defendant to remove the oil headlight now on engine 373, and the oil headlights on other engines belonging to it in the State of Georgia, which, in actual and long-continued practice, have proved safe, adequate and sufficient, and to purchase and substitute therefor electric headlights and reflectors of the character referred to in the Headlight Law, is to deprive defendant of its property without due process of law, in violation of the provisions of the 14th Amendment to the Constitution of the United States, in that:

(a) It deprives defendant of the use of, and forces it to abandon, several hundred safe, sufficient and efficient oil headlights of the value of $20 each.

(b) It requires defendant to purchase an equal number of electric headlights, at a cost of from $250 to $400 each.

(c) It deprives defendant of the right to manage its own property.

(d) It deprives defendant of the right to manage its own property, and forces it to purchase electric headlights, although oil and acetylene headlights are now in practical and successful operation on many railroads in the United States.

(e) It deprives defendant of its right to contract, in that defendant is forced to purchase electric headlights and reflectors, notwithstanding its belief and that of its officers based on practical experience, that the oil headlight is sufficient, and is superior to the electric headlight and better adapted to the uses and purposes for which headlights are used.

(f) It deprives defendant of its right to contract, in that it forces defendant to purchase electric headlights, although electric headlights are covered by a patent, and defendant will be forced to pay such prices as may be demanded by the manufacturer, and when the passage of the Headlight Law will inevitably tend to increase the demand, and thereby increase the prices of such headlights.

(g) It deprives defendant of its right to manage its own business and affairs, it affirmatively appearing that the oil headlight costing $20, and kept and maintained in good order at small expense, is safe and sufficient, while not only the first cost of the electric headlight of $250 to $400 is more expensive than the oil headlight, but costs more to keep in repair, and said electric headlight is more liable to get out of repair, and is otherwise less desirable than an oil headlight.

(h) It deprives defendant of the right to manage its own business and affairs, for that it not only purports to require defendant to use electricity in lighting the headlights on the engines, to the exclusion of oil, acetylene or other substance, but requires it to use a given power of electricity.

(i) It deprives defendant of the right to manage its own property and business and affairs, and interfere with interstate commerce, because it requires defendant to adopt an unwise and disadvantageous management, in this that it requires all switch engines which go upon the main line after dark to be equipped with the electric headlight, whereas it is shown by uncontradicted evidence that an electric headlight can not be used without great danger and disadvantage upon a switch engine, and it is also shown that all of the yards of the defendant company in Georgia are divided by its main line,

and none of its yards can be worked at night by a switch engine, unless that engine goes frequently upon said main line.

* * * * * * * *

(9) Because said judgment of the court finding defendant guilty is contrary to law.

(10) Because said judgment of the court finding defendant guilty is contrary to law, in that it is based on a void statute not passed as required by the Constitution of Georgia; or if the statute was properly passed, said statute was void because it deprives defendant of its property without due process of law in violation of the 14th Amendment to the Constitution of the United States, and said statute materially and directly interferes with interstate commerce, in violation of the provision of the Constitution of the United States that, "Congress shall have power to regulate commerce between the States."

Wherefore the Atlantic Coast Line prays that its motion for a new trial, and amended motion for a new trial may be inquired into and that the court will set aside the judgment and finding, and grant this defendant a new trial.

The judge of said city court at the foot of these grounds, on January 25, 1910, stated with respect thereto, over his signature:

"*The recital of facts therein are true.*" (R. 100.)

But in passing on the railroad company's motion and grounds for a new trial the same were overruled by said city court. (R. 100.)

A brief of the evidence offered or introduced by the railroad company and the State on the trial in the city court was made up by counsel and approved by the judge of that court. (R. 35-96.)

From the judgment of conviction the railroad company appealed to the Court of Appeals of Georgia. That court on March 15, 1910, entered an order directing the clerk thereof to transmit to the Supreme Court of Georgia certain questions in the case, upon which it desired the instructions of the latter court (R. 101). These questions cover all the questions, both State and Federal, raised by the railroad company in the city court by its demurrer to the accusation and its motion and grounds for a new trial. (R. 101-104.) Omitting those of a State nature, questions Nos. 4, 5, 6, 8, and 9 are as follows:

> The Court of Appeals desires the instruction of the Supreme Court as to the following questions necessary to the proper determination of said case:
>
> 4. Is said Act void because it violates the provisions of the 14th Amendment to the Constitution of the United States, which provides that: "No State * * * shall deprive any person of life, liberty or property without due process of law" on the alleged ground "that the said Act requires defendant to discontinue the use of property lawfully acquired and lawfully held, although furnishing sufficient and adequate headlight; forces defendant to abandon the use of lamps, reflectors, headlights and material lawfully held, although adequate and sufficient for the production of safe and sufficient headlight and reasonably adapted to the protection of person and property, whether on the track or on the locomotive and cars; compels defendant to purchase expensive machinery for the purpose of generating a specific current of electricity and to purchase a reflector of a size designated by the statute, thereby depriving defendant of its right to make contracts and to manage its own business?"

5. Is said Act void because it violates the provisions of the 14th Amendment to the Constitution of the United States which declares: "No State * * * shall deny to any person within its jurisdiction, the equal protection of the laws," on the alleged ground "that the said headlight law does not apply equally to all persons and corporations in the same class or similarly situated; said Act makes an unreasonable and arbitrary classification, whereby it excludes from the operation of said Act, persons owning and operating railroads and likewise excludes from the operation of said Act receivers operating railroads, even though said receivers operate fast trains through cities, towns, and thickly settled districts of the State; nor does said Act apply to tram roads, mill roads, or roads engaged principally in lumber or logging transportation in connection with mills—even though the locomotives used thereon for a whole or part of their route, may be operated at fast speed, and through thickly populated districts?"

6. Is said Act void because repugnant to Art. 1, Sec. 8, Par. 3 of the Constitution of the United States, which provides that, "Congress shall have power to regulate commerce with foreign nations, among the States and with the Indian tribes"—on the alleged ground "that the enforcement of said statute and said statute itself interferes with and regulates interstate commerce; hinders and delays the running of locomotives having no such headlight as is required by said statute, although said locomotives are lawfully engaged in hauling cars and trains for interstate commerce; makes it unlawful for defendant or other companies operating interstate railways, to use, in the State of Georgia, locomotives having no headlight of the kind described in said alleged enactment, although said locomotives are lawfully used up to the State line—all with the result of delaying interstate commerce and rendering

it impossible for interstate railroad companies crossing the Georgia line, to conduct their interstate business with usual, customary, and proper dispatch?"

* * * * * * * * *

8. It appears from the record that the defendant was engaged in interstate commerce; that it failed to equip one of its locomotives engaged in that interstate commerce with a headlight of the standard required by the Act in question. Was the defendant, as to this locomotive while so engaged in interstate commerce (it being run partly in this State and partly in South Carolina), exempt from the provisions of the Act, on the ground that to apply the law to the operation of this locomotive as so engaged would be violative of the provision of the Constitution of the United States quoted above, conferring upon Congress exclusive power to regulate interstate commerce?

9. Where it appears from the proof that the defendant's locomotives were prior to the passage of the Act, equipped with oil-burning headlights, or with electric headlights different from that prescribed by the Act in question, is it any defense to a prosecution under the Act that these headlights have in the experience of the defendant and other railroad companies usually proved reasonably safe and efficient (there being proof, however, that headlights of the prescribed standard are more efficient), and that to substitute electric headlights of the standard prescribed would entail expense of greater or less amount; the contention of the defendant being that to enforce the Act under the circumstances would amount to depriving the defendant of it property without due process of law, in violation of the 14th Amendment to the Constitution of the United States and in violation of Art. 1, Sec. 1, Par. 3 of the Constitution of this State; because it rendered the value of the old headlights less or totally destroys it and entails upon the defendant the expendi-

ture of large sums of money; and deprives the defendant of the right to regulate its own business and affairs and causes it to submit to an arbitrary and unreasonable regulation thereof?

Wherefore, it is ordered that a certified copy of these questions together with the bill of exceptions and record be transmitted to the Supreme Court by the clerk of this court.

In response to the questions propounded to it by the Court of Appeals, the Supreme Court delivered an elaborate opinion on January 4, 1911, in which said questions, both State and Federal, were answered adversely to the contentions made by the Railroad Company, and said State statute was upheld in all respects as a valid exercise of the police powers of the State of Georgia. (R. 105-119.)

The Court of Appeals, in pursuance of the instructions thus obtained from the Supreme Court of Georgia, entered its final judgment January 17, 1911, on the appeal of the Railroad Company, as follows (R. 120):

By the Court:

Powell, J.: This case involves only questions as to the constitutionality of what is known as the "headlight Act" of 1908. These questions have been certified to the Supreme Court, and by that tribunal have been answered, the holding being that the Act is constitutional. 135 Ga. 545 (69 S. E. 725). The judgment of the trial court is therefore affirmed.

From that judgment this writ of error is prosecuted with supersedeas by the Railroad Company against the State of Georgia on the errors assigned as follows (R. 6-9):

ASSIGNMENT OF ERRORS.

Atlantic Coast Line Railroad Company, in connection with its petition in the above stated case for a writ of error, makes the following assignment of errors, which it avers occurred upon the trial of the case and in the judgment of the Honorable the Court of Appeals of the State of Georgia, which is the court of last resort in the State of Georgia having jurisdiction of this cause, and before which this cause was heard on appeal from the Honorable the City Court of Richmond County, Georgia:

1.

The Honorable the Court of Appeals of Georgia erred in affirming the judgment of the court below, to-wit, the City Court of Richmond County, Georgia, in which a judgment was rendered in favor of the State of Georgia finding the defendant, the Atlantic Coast Line Railroad Company, guilty of a misdemeanor as charged in the accusation, to-wit: "For that said defendant, in the county aforesaid, on the 14th day of August, in the Year of Our Lord 1909, with force and arms did, being then and there a railroad company operating in said county, unlawfully fail and refuse to equip and maintain a certain locomotive known as No. 373, and then and there used by said company to run on its main line after dark with a good and sufficient headlight which shall consume not less than 300 watts at the arc with a reflector not less than (see stipulation, R. 9-10) 23 inches in diameter, said main line then and there not being a portion of the said railroad line, used solely as a yard, spur or sidetrack;" and in not reversing the same, because said judgment and the Act of the Legislature of Georgia on which it was based deny to Atlantic Coast Line Railroad Company the equal protection of the law and take its

property without due process of law contrary to the Fourteenth Amendment of the Constitution of the United States of America; and the said judgment and the said Act of the Legislature of Georgia on which it is based violate Article One, Section 8, Clause 3, of the Constitution of the United States, which empowers Congress to regulate commerce among the several States.

2.

That the Honorable the Court of Appeals of Georgia erred in affirming said judgment and in not reversing it, for that in doing so it held that the Act of the Legislature of the State of Georgia approved August 17, 1908, found in the published laws of Georgia for 1908 on pages 50 and 51, and entitled "An Act to require all railroad companies in the State to equip and maintain each and every locomotive used with sufficient electric headlight, to prescribe a punishment for the failure to so equip, and for other purposes," under which the conviction upon which the judgments of the City Court of Richmond County and of the Court of Appeals of Georgia were had, was based, and the enforcement thereof did not contravene that part of the Fourteenth Amendment to the Constitution of the United States, which provides that "No State * * * shall deprive any person of life, liberty, or property without due process of law" on the ground alleged by this plaintiff in error "that the said Act requires defendant (this plaintiff in error) to discontinue the use of property lawfully acquired and lawfully held, although furnishing sufficient and adequate headlight, forces defendant to abandon the use of lamps, reflectors, headlights and material lawfully held, although adequate and sufficient for the production of safe and sufficient headlight, and reasonably adapted to the protection of person and property, whether on the track or on the locomotive and cars; compels

defendant (plaintiff in error) to purchase expensive machinery for the purpose of generating a specific current of electricity, and to purchase a reflector of a size designated by the statute, thereby depriving defendant of its right to make contracts and to manage its own business."

3.

That the Honorable the Court of Appeals erred in affirming the judgment of the City Court of Richmond, and in not reversing the same for that in doing so it held that the aforementioned Act of the Legislature of the State of Georgia of August 17, 1908, upon which this prosecution is founded and the enforcement thereof does not violate so much of the Fourteenth Amendment to the Constitution of the United States, which declares, "No State * * * shall deny to any person within its jurisdiction the equal protection of the laws," on the ground alleged by this plaintiff in error that the said headlight law does not apply equally to all persons and corporations in the same class or similarly situated. Said Act makes an unreasonable and arbitrary classification whereby it excludes from the operation of said Act receivers operating railroads even though said receivers operate fast trains through cities, towns and thickly settled districts of the State; and further because the said Act does not apply to tram roads, mill roads, or roads engaged principally in lumber or logging transportation in connection with mills, even though the locomotives used therein for a whole or part of their road may be operated at fast speed and through thickly populated districts.

4.

That the said the Honorable Court of Appeals of the State of Georgia erred in affirming the judgment of the City Court of Richmond County, and in

not reversing the same for that in doing so it held that the said Act of the Legislature of the State of Georgia approved on the 17th day of October, 1908, and the enforcement thereof (the said Act being the Act on which this prosecution is based) did not violate the Fourteenth Amendment to the Constitution of the United States for that prior to the passage of the said Act this plaintiff in error's locomotives were equipped with oil-burning headlights or with electric headlights different from that prescribed by the Act in question, and that these headlights have in the experience of the plaintiff in error and other railroad companies usually proved reasonably safe and efficient; that to substitute electric headlights of the standard prescribed would entail expense of greater or less amount and would render the value of the oil headlights less or totally destroy them, and would entail upon this plaintiff in error the expenditure of large sums of money and deprive this plaintiff in error of the right to regulate its own business and affairs and cause it to submit to an arbitrary and unreasonable regulation thereof, and thereby deprive it of its property without due process of law.

5.

That the said the Honorable Court of Appeals of the State of Georgia erred in affirming the judgment of the City Court of Richmond County, Georgia, and in not reversing the same for that in doing so it held that the said Act of the Legislature of Georgia, approved August 17, 1908, on which this prosecution is based, is not void because repugnant to Article 1, Section 8, Paragraph 3 of the Constitution of the United States, which provides that "Congress shall have power to regulate commerce with foreign nations, among the States and with Indiana tribes," on the ground alleged by this plaintiff in error that the enforcement of the said statute and the statute itself interfere with and regulate interstate

commerce, hinders and delays the running of locomotives having no such headlight as is required by said statute, although said locomotives are lawfully engaged in hauling cars and trains for interstate commerce; and it makes it unlawful for the defendant or other companies operating interstate railways to use in the State of Georgia locomotives having no headlight of the kind prescribed in said alleged enactment, although said locomotives are lawfully used up to the State line—with the result of delaying interstate commerce and rendering it impossible for interstate railroad companies crossing the Georgia line to conduct their interstate business with usual, customary and proper despatch.

6.

That the Honorable the Court of Appeals of the State of Georgia erred in affirming and not reversing the said judgment of the City Court of Richmond County for that in doing so it held that notwithstanding this plaintiff in error was engaged in interstate commerce and that the one of its locomotive engines which it failed to equip with the headlight of the kind required by the aforementioned Act of the Georgia Legislature approved August 17, 1908, on which Act this accusation was based, and the said accusation being likewise based upon the use of said engine when it was engaged in interstate commerce, it being partly run in the State of Georgia and partly in South Carolina, and was, as this plaintiff in error claimed and now claims, exempt from the provisions of the said Act on the ground that to apply the same to the operation of said locomotive so engaged would be violative of the provision of the Constitution of the United States in reference to interstate commerce, to-wit, Article 1, Section 8, Paragraph 3, which provides that "Congress shall have power to regulate commerce with foreign nations, among the States and with the Indian tribes;" which said pro-

vision conferred upon Congress, as this plaintiff in error contended and contends, the exclusive power to regulate interstate commerce.

Wherefore Atlantic Coast Line Railroad Company prays that the judgment of the Honorable the Court of Appeals of Georgia in favor of the State of Georgia and against the Atlantic Coast Line Railroad Company be reversed.

ARGUMENT.

I.

The Act Known as the Georgia Headlight Law is Violative of the Due Process Clause of the Fourteenth Amendment.

It is insisted for the Railroad Company that this Act exceeds the police power of the State, because it conflicts with the due process clause of the Fourteenth Amendment to the Constitution of the United States. The police power of the State is subject to judicial review. As this court said in *Lawton v. Steele,* 152 U. S. 133:

> To justify the State in thus interposing its authority in behalf of the public, it must appear, first, that the interest of the public generally as distinguished from those of a particular class require such interference; and, second, that the means are reasonable and necessary for the accomplishment of the purpose and not unduly oppressive upon individuals. The Legislature may not, under guise of protecting the public interest, arbitrarily interfere with private business or impose unusual or unnecessary restrictions upon lawful occupations. In other words, its determination as to what is a proper exercise of its police powers is not final or conclusive, but is subject to the supervision of the courts.

The provisions of this Act afford no discretion or choice to the Railroad Company in the selection or use of headlights on its locomotives, and no power or discretion in the matter is left to the investigation and deter-

mination of the Railroad Commission of the State or to the Railroad Company in emergencies or under conditions beyond the control of the Railroad Company. Its terms are inflexible. Such legislation is condemned by this court as arbitrary and void when applied to an interstate railroad. (*Houston & Texas Central R. R. Co.* v. *Mayes*, 201 U. S. 321, 329.) The headlight required shall consume *not less* (it may consume more) than three hundred watts of electric current at the arc, with a re-reflector *not less* (it may be greater) than twenty-three inches in diameter. This Act excludes from consideration or adoption by the Railroad Company all other kinds of headlights save the one kind prescribed therein; it permits of but one substance for such lighting, used in one particular manner; it requires at least a given quantity of that substance, and a reflector of a stated minimum size; it compels the non-use or destruction of all other headlights already in use and with which practically all the Railroad Company's locomotives in service are equipped; and, as the evidence demonstrates, the headlight provided for is of doubtful utility, if not actually harmful and dangerous to human life and property, in the operation of railroad trains by reason of its obscuration of signal lights, changing their different colors, causing mistakes by trainmen, etc. (R. 40, 50, 57, 59.)

In *Elliott on Railroads*, Second Ed., Sec. 668, he states:

> Nor do we believe that the Legislature can prescribe a particular or specific kind of light that shall

be used; for, as we believe, the legislative power extends no further than the enactment of a statute requiring tracks to be so lighted as to afford protection to the members of the community.

In a note at page 24 of Volume 2 he further says:

> To hold that the Legislature may arbitrarily and conclusively determine exactly what kind of a light should be used would be to confer upon it the absolute power to choose between different kinds of light, and this would make the Legislature the absolute arbiter of all questions of fact such as the sufficiency of the light, its suitableness for the purpose and like questions, thus denying a hearing upon such questions. We do not mean to say that the Legislature may not provide that a general kind of light may be used, as, for instance, electric lights or gas lights; but what we mean is, that the Legislature can not arbitrarily require the use of a lamp or lamps of a particular pattern or description.

We contend that this Act which allows no deviation from its requirements, which are to be enforced with heavy penalties, is invalid. Here the Railroad Company by the enforcement of this Act would be compelled, without a hearing or a right tc be heard being afforded upon the reasonableness or adaptation of the statutory headlight to the purpose designed, to discard an important and material part of its present equipment at great and irreparable loss, and to procure at a large outlay the machinery and appliances with which to generate, produce, and burn the necessary volume of electric current on each of its 556 main line locomotives, which are operated, and run into and out of Georgia, as well as South

Carolina, North Carolina, Virginia, Florida and Alabama.

It is not sufficient under the provisions of this Act for the Railroad Company to obtain efficient, successful, and satisfactory results from the use of reasonable means, thoroughly tried and found so from long experience, but it must use a given kind of headlight, without regard to whether there are better ones, or whether there are those in general use which have heretofore and can hereafter produce reasonable and more satisfactory results or service in the operation of railroad engines and trains at less cost and with greater safety.

It seems to us that such a statute is destructive of the fundamental rights of property and liberty, and, therefore, void.

The Supreme Court of Indiana held in *Cleveland, C. C. & St. L. R'y Co.* v. *City of Connersville,* 37 L. R. A. 175, as follows:

> A city can not, under the power granted by Acts 1893, page 302, authorizing it to require lights at railway crossings for the 'security and safety of citizens' require a railroad company whose only scheduled train at night passes through the city at 8 o'clock, to light each street crossed by its road at the crossing from dark to dawn with an arc lamp of 2,000 candle power.

The court in that case quoted with approval its former decision in *Shelbyville* v. *C. C. C. & St. L. R'y Co.,* 146 Ind. 66, 44 N. E. 929, as follows:

> Under the authority so given, the ordinance provided for electric lights, which provision, we think, was authorized, inasmuch as electric lights were maintained by the city, but it was also provided in the ordinance that the lights should be of the 'arc pattern,' thus confining the company to a particular kind of electric lighting, possibly to particular lamps in use in the city. Doubtless, under the statute, the ordinance could have required the lights to be of a power sufficient to light the crossing, not to exceed that in use in the city; but there could be no authority further to interfere with the company's freedom of contract in providing such electric lights as it might prefer.

In the former case the court also said:

> We think that in this case the Connersville Council exceeded the power conferred by the statute in requiring that the electric lights should be of a particular pattern.

In that case the city was authorized by statute to provide what kind of lights the railroad should maintain.

The evidence in this case shows (Brief of Evidence, R. 42, 43, testimony of R. E. Smith) that an essential piece of the apparatus used in generating the electricity to be used in the headlights of the kind referred to in the Act in question is covered by letters patent issued by the United States Government.

Of course, the object of letters patent is to give the owner a monopoly; he may permit the use of a patented article on such terms as he may desire or he may withhold the article from the market entirely. (*Hollister* v. *Benedict & Burnham Mfg. Co.*, 113 U. S. 59; *United*

States v. *Palmer,* 128 U. S. 262, 271; *National Phonograph Co.* v. *Schlegel,* 128 Fed. 733; *Bement* v. *National Harrow Co.,* 186 U. S. 70.)

The State has no power to force the patentee to permit the use of the article patented on terms which it may deem reasonable.

In the case of *C. H. & D. R. R. Co.* v. *Bowling Green,* 41 L. R. A. 422-426, 57 Ohio St. 336, the Supreme Court of Ohio said:

> Did the ordinance unreasonably limit the right of the railroad company to contract on its own behalf, or unreasonably place it within the power and subject it to extortion at the hands of the electric light and power company, of which it must procure the lights? True, the railroad was required to adopt electricity as the means of illumination, and was confined to the kind of lamps and their attachments then in use in said village. If the exclusive right to use within the village these lamps and attachments had been granted by the patentee to the Bowling Green Electric Light & Power Company, and this company had an absolute power to fix the price that it could exact for the use of its light and lamps, then the contention of the railroad company would find strong support in reason and justice. It may be conceded, however, that the lamps and their attachments, as well as the system of lighting, in use in the village of Bowling Green, were all protected by patents, and that the Bowling Green Electric Light & Power Company had the exclusive right to their use within that village, and yet the power of extortion would not follow necessarily. * * * The use to which it has devoted its property is one in which the public have an interest, and it requires the use of the streets and alleys of the village to conduct and distribute electricity to its lamps for illuminating

> purposes. * * * Both reason and authority deny to a corporation clothed with such rights and powers, and bearing such relation to the public, the power to arbitrarily fix the price at which it will furnish light to those who desire to use it. * * * The Bowling Green Electric Light & Power Co. was bound to serve all of its patrons alike; it could impose on the plaintiff in error no greater charge than it exacted of others who had used its lights.

There is a great difference in the authority of the State over a concern which has devoted its property to a public use and over the patentee of an electric headlight.

The State has no authority over the patentee of the headlight. To require the plaintiff in error to buy from such a patentee is to place it in the power of the patentee to extort from the plaintiff in error any price which the patentee may desire.

It is the duty of the courts and of the Legislature to avoid interference, except where absolutely necessary, "with the ordinary right which a railway company in common with every other company or individual, possesses of regulating and managing its own affairs, either with regard to charges or accommodation as to the agreements and bargains it may make in its particular business."

(*Interstate Commerce Commission* v. *B. & O. R. Co.*, 43 Fed. 53, in which the case of *Baxendale* v. *Railway Co.*, 5 C. R. (N. S.) 336, is quoted with approval.)

The evidence in this case shows it will cost to buy and install an electric headlight upon an engine of the

Railroad Company the sum of $250. It will cost to maintain that headlight from $250 to $400 per annum. (Brief of Evidence, R. 42, R. E. Smith's testimony.) All but a few of the engines of the Railroad Company are equipped with oil headlights, having reflectors 16 inches in diameter. It is the kind used in Virginia, North Carolina, South Carolina, Florida, Alabama and Georgia. It costs about $18. (Brief of Evidence, R. 40.)

The Railroad Company has 671 engines, about 115 of which are switch engines. (Brief of Evidence, R. 39.)

The engines which run into Georgia on the tracks of the railroad company frequently go into Florida, Georgia and South Carolina; a great many of its trains run into two of those States without change of engines, and sometimes into all three States. (Brief of Evidence, R. 37, 42, 51.)

Engine No. 373, which is made the foundation of this prosecution, was at the time of the alleged infraction of the law running between points in South Carolina and Georgia, that is to say: Augusta, Ga., and Florence, S. C., a distance of 168 miles. (A. W. Anderson's testimony, R. 36.)

Engines are frequently run from one division to another making a change from one State to another, to move some sudden congestion of freight.

So that if the State of Georgia may require all engines running on the main lines of the railroad company to be equipped with the headlights of the kind referred to, it will cause the equipment of many more engines than those habitually assigned to duty within the

State, thereby incurring the cost of equipment and the cost of maintenance to an enormous degree.

This Act not only requires the incurring of this new expense of equipment and maintenance, but it requires the destruction or loss of the oil headlights, now in use on the engines to be equipped with electric headlights for use in Georgia, and those oil headlights are of considerable pecuniary value.

The Supreme Court of Wisconsin in the case of *Bonnett* v. *Vallier*, 17 L. R. A. (N. S.) 492, 116 N. W. 885, held as follows (quoting from *Health Department* v. *Trinity Church*, 145 N. Y. 32-41, 27 L. R. A. 710):

> No one would contend that the amount of the expenditure which an Act of this kind may cause * * * is within the absolute discretion of the Legislature. It can not be claimed that it would have the right, even under the exercise of police power, to command the doing of some act by the owner of property and for the purpose of carrying out some provision of law, which act could only be performed by the expenditure of a large and unreasonable amount of money on the part of the owner. If such excessive demand were made, the act would without doubt violate the constitutional rights of the individual. The exaction must not alone be reasonable when compared with the amount of the work or the character of the improvement demanded; the improvement or work must in itself be reasonable, proper, and a fair exaction when considered with reference to the object to be attained. If the expense to the individual under such circumstances would amount to a very large and unreasonable sum, that fact would be a most material one in deciding whether the method or means adopted for the attainment of the main object were or were not an un-

reasonable demand upon the individual for the benefit of the public. Of this the courts must, within proper limits, be the judges.

The very great expenditure required by this law for equipping, maintaining and operating the said headlights and the great loss to be incurred in displacing existing oil headlights, is for the purpose of having the Railroad Company use a kind of headlight which has been discarded by many railroads, including the Pennsylvania Railroad Company (Brief of Evidence, R. 41), and to have it discard a light which has been the standard for many years, and which is now in common use; and to adopt a light which experienced railroad men swear will blind those who look into it, will change the color on signal lights, will make a blanket of the parcels of moisture in a foggy atmosphere, and in a rain or mist.

The headlight prescribed by this Act is, in the opinion of those who manage the operation of the Railroad Company, not equal to the oil headlights in efficiency, safety or economy. The Act, as to the matters within its scope, entirely supersedes the right of the Railroad Company to manage its own affairs, and permits it no discretion, although the public is not the general manager of the railroads. (*Interstate Commerce Commission* v. *Chicago Great Western R'y Co.*, 209 U. S. 108.)

Not only does the Act prescribe an electric headlight, but it must be an arc light; it must consume a given amount of electricity at the arc; a reflector must be used and it must be not under 23 inches in diameter.

The details to be observed are exacting. It makes no difference that a reflector of increased depth and less diameter may accomplish better results, the required minimum diameter is fixed; it will also make no difference that another substance may be found to make a better and less expensive light, the electricity must still be used; it will make no difference that a new machine may be discovered to use electricity in less quantity with equal effect, the lights must still consume a minimum of 300 watts at the arc; nor will it make any difference that electricity may be used in a different way to produce the same result, the law requires that the lamp shall be an arc lamp.

The manager of the Railroad Company has no discretion, he must buy the kind of lamp prescribed by this Act; he must use the substance required thereby; he must use the quantity of that substance prescribed thereby; and he must use it in the manner required thereby.

It would seem that the opinion of the Supreme Court of Wisconsin in the case of *Bonnett* v. *Vallier, supra,* is one specially in point, as follows (par. 14 of syllabus):

> A general police regulation down to minute particulars of the construction and maintenance of tenement houses, rendering it impracticable to safely comply therewith in the absence of any official approval of plans and specifications in advance and containing no provision for such approval, is unreasonable.

The court in that case also said (at page 491):

> The general effects of the authorities are these: An Act of the Legislature is to be sustained unless

it violates some constitutional limitation beyond reasonable question. Such limitations exist by implication as well as by express prohibition. A public regulation must not extend beyond the reasonable interference which tends to preserve and promote enjoyment, generally, of those 'inalienable rights' with which 'all men are endowed,' and to secure which 'governments are instituted among men,' and must not violate any express prohibition or requirement of the State or National Constitution. When it goes beyond the scope indicated and enters into the dominion of the destructive, it is illegitimate, and offends against some constitutional restraint, express or implied, and though law in form, it is as before said, not law at all; and that whether an Act purporting to be within the field of police power is reasonable or not in the ultimate, is a judicial question. There must be reasonable ground for the police interference, and also the means adopted must be reasonably necessary for the accomplishment of the purpose in view.

It is respectfully submitted that if it be true that a brilliant light is proper for a locomotive headlight, it is not necessary in order to obtain such light to require the use of a given size of reflector, a given substance, and a given amount thereof. The person affected should have the right to contract to his best advantage to obtain the result demanded by the Legislature, and the widest range from which to procure this result.

It may be proper to require a headlight that will show an object on the track a given number of feet; but it never can be proper to require that this light be produced by one certain substance, consumed in a certain way, and in a certain quantity.

The public have an interest in the subject beyond the question of lights. Competition is a part of the public policy of the State; this Act kills competition. At the beginning, it eliminates competition of substances to be used in the making of the light; it stifles human endeavor in the line of finding other substances for the making of such lights. It destroys competition in the manner of using the current, for the use must be by the arc method. There can be no incentive to devolop the incandescent light so that it can be used in this manner. The author of the Act or those interested in its passage have acted as though science, art, and knowledge for all future time are at hand and have determined that electricity is the best material, and that the method by which it is to be applied is the best, and that we now know all that there is to be known on the subject of headlights. This has been done, too, in the light of the experience that electric headlights have been tried and discarded by many of the principal railroads in this country. Manifestly such an Act is not reasonable or valid.

This is not intended as an argument for an ideal; it is for a practical existing thing. The evidence shows that acetylene gas is used in locomotive headlights by some of the largest railroads in the United States, including the Harriman system. (Brief of Evidence, Osteby's testimony, R. 62-66.) That light is very powerful, but not so powerful as the electric light; it does not blind and does not obscure signals. It is less expensive than electricity it has almost no violet rays; the electric light has many. It is an active competitor with elec-

tricity; it is capable of development so that the intensity of its rays may be increased or softened as occasion requires.

The Commercial Acetylene Company has a plant in Atlanta for generating this gas and for charging tanks; but this company can no longer compete in Georgia for the locomotive headlight business (Brief of Evidence, R. 64), and no other person can compete for locomotive headlighting, in that State, who does not use electricity in the manner described in this Act.

Furthermore, the evidence shows as before stated that an essential portion of the headlight machinery is covered by letters patent, and that while there are three or four manufacturers of electric headlight machinery in this country, it is to be presumed that they all have the right to use these letters patent under agreement with the owner thereof. Certainly the evidence shows that the public has no right in these letters patent, nor can the use of them be enforced on terms not acceptable to the patentee.

The record shows that a necessary part of the apparatus that generates the electricity for headlights is a part of the case enclosing such apparatus to protect it from the elements and to afford a bearing for the revolving parts, and that the same is covered by a patent, the name of the manufacturer as taken off one of the locomotives of the plaintiff in error and shipped to Augusta from Waycross, Ga., from one of the old Plant System engines owned by the plaintiff in error, at the time the testimony herein was given, being designated

as follows: "Pyle National Electric Headlight Co. Patented July 30, 1895, November 5, 1895, November 26, 1895, December 31, 1895. Chicago, U. S. Pyle Compound Steam Turbine. 3." (R. 43.)

The Act in question is non-elastic in its requirements; it permits no excuse for a failure of the mechanism to work. The machine is very delicate; the two carbon points must be held one over the other, nearly, but not quite, in contact; the upper carbon must be so held that it can slip downward as it is being consumed; the mechanism that is used to hold these points in position is very fragile (R. 42), yet if this breaks or fails to operate, the entire train is put out of commission, traffic must stop on that line, for it will be a misdemeanor to move that engine even to a side track until daylight, unless another engine with the statutory headlight is procured.

Certainly no enactment could be more arbitrary.

The mechanism and method of operating an electric headlight is described by Mr. R. E. Smith, General Superintendent of Motive Power of the Railroad Company, as follows (R. 42):

> The electric headlight is operated by steam turbine. I have a portion of one of the machines here, the housing plate. The steam is applied from the boiler; it goes to pipes that lead to a portion of the apparatus called the turbine. That is simply a turbine wheel, and the steam is passed through that, *and it revolves probably three thousand revolutions a minute,* and that, in turn, operates the electric generator, and the current so generated is conveyed by means of wires which must be perfectly insulated, to the lamp in the headlight where the current is

passed through two carbons, the same as a street light. These carbons are not kept in contact; they must be kept apart; if they touch, the lamp goes out. Their separation is maintained by an apparatus for that purpose, That machine is covered by a patent; it is so marked on the machines. The steam is taken from the boiler in about a half or three-quarter inch pipe. The pressure there is the same as the pressure in any other part of the boiler. If the pressure is 150 pounds in the boiler, the pressure there would be the same as any other part of the boiler. So much of this steam as goes out of the boiler into the turbine goes out with the same pressure as it goes into the steam chest. In stating that the cost of maintenance and operation is a certain amount, I have included the cost of steam, coal and repairs, the steam being the principal thing * * * The electric light of the kind referred to in this litigation, is subject to frequent repairs and damage, requiring the services at each terminal of a man specially qualified to maintain them. The usual locomotive engineer is not qualified to repair the more serious breaks in the machines, but some of the little things that happen on the road, they are qualified, if they have the time to do it, but on a fast passenger train the engineer will not stop to repair an electric headlight; he will go right on.

In *Wisconsin* v. *Kreutzberg*, 58 L. R. A. 748, the court said (at page 751):

It has become settled, for example, that liberty does not mean merely immunity from imprisonment, and that 'property' is not confined to tangible objects which can be passed from hand to hand; that within the former word is included the opportunity to do those things which are ordinarily done by free men, and the right of each individual to regulate his own affairs, so far as oonsistent with rights of

> others; and within the latter, those rights of possession, disposal, management, and of contracting with reference thereto, which render property useful, valuable, and a source of happiness, right to pursuit of which is preserved.

This court in *Allgeyer* v. *Louisiana*, 165 U. S. 578, 589, said:

> The liberty mentioned in that amendment means not only the right of the citizen to be free from the mere physical restraint of his person, as by incarceration, but the term is deemed to embrace the right of the citizen to be free in the enjoyment of all his faculties; to be free to use them in all lawful ways; to live and work where he will; to earn his livelihood by any lawful calling; to pursue any livelihood or avocation, and for that purpose to enter into all contracts which may be proper, necessary and essential to his carrying out to a successful conclusion the purposes above mentioned.

To the same effect are the following cases:

> *Addyston Pipe & Steel Co.* v. *U. S.*, 175 U. S. 211.
> *Bracewell Coal Co.* v. *People*, 147 Ill. 66, 37 Am. St. Rep. 206.
> *Harbison* v. *Knoxville Iron Co.*, 103 Tenn. 421, 56 L. R. A. 316.
> *Ritchie* v. *People*, 154 Ill. 98, 29 L. R. A. 79.
> *Cleveland* v. *Clements Bros. Co.*, 59 L. R. A. (Ohio) 775.

The privilege of contracting is both a liberty and a property right.

> (*Bracewell Coal Co.* v. *People*, 22 L. R. A. 340.)

The requirement of due process of law was designed to secure the citizen against the arbitrary action of the government.

(*Missouri Pac. R. Co.* v. *Humes*, 115 U. S. 512.)

The arbitrary qualities of this enactment have already been shown. If the owner of a public utility concern is to have any right of judgment in the management of his property this Act is void.

This court in *McLean* v. *Arkansas*, 211 U. S. 547, said:

> It is also true that the police power of the State is not unlimited, and is subject to judicial review, and when exerted in an arbitrary or oppressive manner such laws may be annulled as violative of rights protected by the Constitution.

Property rights can not be wrongfully destroyed by arbitrary enactment.

Dobbins v. *Los Angeles*, 195 U. S. 223.

In *Welch* v. *Swasey*, 214 U. S. 105, this court said:

> If the statutes are arbitrary and unreasonable and beyond the necessities of the case, the court will declare their invalidity.

II.

The Act in Question Violates the Equal Protection Clause of the Fourteenth Amendment.

Equal protection of the laws means the protection of equal laws. (*Yick Wo* v. *Hopkins*, 118 U. S. 356.)

This Act requires each locomotive used by said company run on its main lines after dark, to be equipped with a good and sufficient headlight, which shall consume not less than three hundred watts at the arc, and with a reflector not less than twenty-three inches in diameter, and the same to be kept in good condition.

The words "main line" are defined to mean all portions of the railway line not used solely as yards, spurs, and sidetracks.

A violation of the Act is made a misdemeanor, and "on conviction shall be punished by fine as prescribed in Section 1039 of the Code of 1895" (Vol. 3), which provides:

> Every crime declared to be a misdemeanor is punishable by a fine not to exceed one thousand dollars.

There are excepted from the operation of this Act tram roads, mill roads and roads engaged principally in lumber or logging transportation in connection with mills.

Aside from all the exceptions made within the Act itself a proper construction of the same excludes from its

application receivers, who are operating railroads. By its terms, it only applies to railroad companies.

The receivers of the Seaboard Air Line Railway filed in the Federal court at Atlanta a bill to enjoin the operation of this Act. When that bill came on for hearing, the State conceded that the Act had no application to receivers operating railroads and thereupon the cause was disposed of.

The Seaboard Air Line Railway was at the time of the passage of this Act, as well as on its effective date, and now, a great railroad system, embracing many miles of road within the State of Georgia, and competing with plaintiff in error, and with many other railroads. One of the effects of this Act would be to make it a misdemeanor for the Atlantic Coast Line to operate any one of its locomotives on its main line in Chatham County after dark, without a headlight equipment of the kind referred to in this Act, while a locomotive operated by the receivers of the Seaboard Air Line Railway in the same county, at the same time and one mile distant from the said tracks of the Atlantic Coast Line, would not be a misdemeanor. Both trains might be destined from the same point, Savannah, to the same terminus, Jacksonville, Florida; both trains might be carrying an equal number of passengers, and manned by the same kind of crew; and still one act would be a public offense, and the other not. We submit that such a state of facts can not legally exist, and to undertake to enforce such an Act is a denial to the railroad company of the equal protection of the laws.

Classification of subject-matters for legislation is permitted, but this classification must always rest upon some difference which bears a reasonable and just relation to the act in respect to which the classification is proposed, and can never be made arbitrarily and without any basis. (*Gulf, Colorado & Sant Fe R'y* v. *Ellis,* 165 U. S. 150, 155, 159, 160, 165; *Cotting* v. *Kansas City Stock Yards,* 183 U. S. 79; and *Los Angeles County* v. *Hollywood Cemetery,* 57 Pac. (Cal.) 153.)

This legislation may not, under the guise of protecting the public interests, arbitrarily interfere with private business, or impose unusual or unnecessary restrictions upon lawful occupations. In other words, the Legislature's determination as to what is a proper exercise of its police powers, is not final, but is subject to the supervision of the courts. (*Henderson* v. *Mayor of the City of New York,* 92 U. S. 259, and *Lochner* v. *New York,* 198 U. S. 45.)

If the safety of the public be the matter which the Legislature intended to conserve in the passage of this Act, why is not the safety of that part of the public riding on railroads operated by receivers, on tram roads, or on mill roads, or on roads engaged principally in lumber or logging transportation in connection with mills, as much a subject for legislation as are the lives and safety of those who ride upon other kinds of railroads? There are two classes of persons who may be protected while riding on railroads; the one is the operative, the other is the passenger. Is the operative on the excepted roads of less importance than the operative on the un-

expected roads? Is there a material distinction between the enginemen on a mill road, or a tram road, or roads engaged in lumber or logging transportation in connection with mills, or on roads operated by receivers, as compared with the enginemen on other classes of roads? There are a number of roads in Georgia that are twenty to forty miles in length. Many of these roads grew up in connection with lumber mills, and transport passengers while hauling lumber and logs. While they are thus engaged, under the law, they are exempt from the provisions of this headlight Act, but so soon as the mill moves, the same road, without regard to change in length, or to change in its trains, or to change in the number of passengers hauled, must become equipped in accordance with the provisions of this headlight Act. We submit that this is an arbitrary classification. It might have been just as well to have said that an engine carrying Pullman cars must be so equipped, and an engine not carrying Pullman cars need not be so equipped. We, therefore, find upon an examination of this Act that it has classified railroads into those operated by railroad corporations, without regard to length of line; and it has exempted the same kind of railroads operated by receivers; also tram roads, mill roads, and roads engaged principally in lumber and logging transportation in connection with mills, without regard to the condition of the track, the employes employed, or the passengers hauled. We insist that these facts make an arbitrary classification and deny to the railroad company the equal protection of the laws.

We call attention to some of the decisions on the question of the equal protection of the laws. The number of them in the books is apparently without limit, but each case is controlled on different principles.

The Supreme Court of Illinois held void an Act of the Legislature of that State, which required the owners of coal mines who pay their employes by weight, to weigh all coal mined for the purpose of fixing the wages of the employes, as violating the rights of the employes to contract in which manner their wages shall be fixed. *Harding* v. *People*, 43 N. E. 624. In the opinion in that case the court said:

> It is plain that the Act not only singles out the operator of a mine, and imposes restrictions and burdens upon him, as to the use and enjoyment of his property, that are not imposed upon other branches of business similarly situated and conducted, but it divides the operators of mines, and only applies its provisions to those whose product is shipped in a certain manner. * * *
>
> The distinction is based solely upon the fact that the product being shipped by rail or water, and counsel have been able to suggest no reason why the Legislature should require the product of such a mine to be weighed in the manner specified, and not that of another mine where the product is sold on the spot. The distinction between operators who sell their product at the mine to some shipper who ships it away to the market, and those who themselves ship their coal by rail or water, is purely arbitrary. Any reason that would apply to one, calling for a restriction upon the manner of doing business, would be equally applicable to the other; and special burdens and restrictions upon one class,

> not imposed upon the other, constitute an arbitrary deprivation of rights.
>
> As the Act makes that an offense, if committed by a person engaged in one branch of mining, which if done by persons in another branch of the same business is lawful, without any reason for distinction between the two, we must regard it as unconstitutional.

That decision is specially applicable to the present case, when it is considered that an engine operated by the Railroad Company without an electric headlight as provided for by this Act, will make a misdemeanor; but when operated in like manner by a receiver of its competitor will not make a misdemeanor. An engine operated by a tram road or by a mill road or by a road engaged principally in lumber or logging transportation in connection with mills, is not a public offense, although it is entirely possible for such road to compete with a branch line of the plaintiff in error.

The fact that the Act is lawful on its face, and apparently fair in its terms, will not save it from being unconstitutional, if it is enforced in such manner as to work a discrimination against a part of a community for no lawful reason. (*Dobbins* v. *Los Angeles*, 195 U. S. 223; *Yick Wo* v. *Hopkins*, 118 U. S. 356.)

Apart from the fact that this law makes the unreasonable and arbitrary classification before mentioned, and is void on that account, it is also void as violative of the equal protection clause of the Fourteenth Amendment, in this, that it destroys the Railroad Company's right to contract; and it is forced by this Act not only

to furnish a good and sufficient headlight, capable of distinguishing objects upon its roadbed for a reasonable distance, but it is required to use one substance, in one given manner, and to use a reflector of not less than a certain diameter, to destroy its headlight equipment now in use, and to buy expensive machinery which is covered by a patent over which the State has no control.

It is also denied the equal protection of the laws by the fact that the use of its equipment is limited to a State line, or it can and likely will be limited to a State line by the various States adopting different or conflicting regulations within their respective territories.

This Act is further violative of the equal protection clause aforesaid, in that every locomotive must be equipped as required by the Act, if it is to operate on any part of the Railroad Company's main line in Georgia. The main line is defined to mean all portions of the railroad lines not used solely as yards, spurs and sidetracks. The evidence shows that practically all of the yards of the plaintiff in error in Georgia, and especially its yards at Augusta, are divided by the main line; that is, that a train coming into the station at Augusta comes through the yards, the side tracks and switch tracks are on either side of the track on which such train comes into the station. The evidence shows that it is impossible to use the switch engines which work in the yards, without having them move across, and on the main lines; that these switch engines are constantly on the main line, and that one switch engine may go upon the main line a hundred times in one night. (R. 38.)

The evidence further shows that it is dangerous and impossible to use a switch engine which is equipped with a light of the kind required in this Act, because the light given out is too brilliant, blinds the operatives, and is likely to produce damage not only to the presons operating the same, but to all other persons in the yards, and to the equipment. (R. 40, 41, 48, 57.)

It is submitted that an Act, which can not be complied with, without creating danger to property and to human life, on the one hand, and that danger can not be avoided by use of another kind of headlight, without committing a violation of its terms, on the other, is arbitrary and unreasonable, and denies the plaintiff in error the equal protection of the laws.

Furthermore, this Act is violative of the said equal protection clause, because the company is made liable as for a misdemeanor in any county in which the locomotive not so equipped and maintained may be run. If this provision be valid, the number of misdemeanors which the railroad company may commit with one engine would appear to be limited only by the number of *counties* in which such engine might be run within a given night. If an engine left Savannah and moved to Thomasville in one night, it would violate this Act in every county through which it operated. If the railroad company operated twenty engines in one night, and each engine moved through ten counties, it would on each night commit two hundred public offenses under this Act. The number of public offenses and the number of penalties therefor (each punishable with a maximum fine of

$1,000) are measured alone by the number of *counties* each engine enters without being equipped with the statutory headlight.

III.

The Headlight Act of the State of Georgia is Unenforcible and Void, Under the Commerce Clause of the Federal Constitution, and Because Congress by its Legislation has Pre-empted and Occupied the Field of Regulation of the Same Subject-matter.

This Act applies and was intended by its framers to apply to "all railroad companies" (except those of the classes named in Section 4), whether engaged in interstate commerce or intrastate commerce or both, and to "each and every locomotive used by such company to run on its main line," whether in interstate commerce or intrastate commerce or both.

The undisputed facts in the record show the particular locomotive, No. 373, which had not been equipped as provided by this Act, and on account of which the Railroad Company was accused of committing a misdemeanor and fined $250, was at the time being regularly used in the transportation of interstate freight trains over the Railroad Company's main line of railroad, 168 miles in length, between Augusta, Ga., and Florence, S. C. It was a ten-wheel, copper head, triple expansion engine, made by the Baldwin Locomotive Works, acquired about two or three years before, and was equipped with a standard oil headlight having a 16-inch reflector,

with a lens of about the same diameter, comparing favorably with the standard headlights of other railroad companies in southern territory, and used on engines carrying the Railroad Company's best and fastest through passenger trains, known as the Palm Limited and Florida Special, between Jersey City and Jacksonville via Richmond, Rocky Mount, Florence and Savannah. (R. 36, 37.)

It is plain, therefore, from an inspection of the record, this locomotive 373 was an instrument of interstate commerce; that it was being so used at the date of the accusation herein, and that it did no intrastate business. (R. 37.) It was the property and part of the rolling stock of a common carrier by railroad engaged in interstate commerce, subject to all the Acts of Congress hereinafter referred to.

As well established by the decisions of this court, the powers of the States and Congress, respectively, over the general subject of commerce, are divisible into three classes of cases:

(1) Those in which the power of the States is exclusive.
(2) Those in which the States may act in the absence of legislation by Congress.
(3) Those in which the action of Congress is exclusive, and the States can not interfere at all.

(*Covington & Cincinnati Bridge Co.* v. *Kentucky*, 154 U. S. 204, 209, 210-12.)

1. We insist the facts shown by the record herein bring the Georgia Headlight Act within the third class.

But if not, then certainly within the second class, and when enacted there was not an absence of legislation by Congress.

The provisions of this Act place a burden upon and interfere with interstate commerce.

The Georgia Act seriously affects the time to be made by a through train. It is shown that the Atlantic Coast Line is a large system, operating in Virginia, North Carolina, South Carolina, Georgia, Alabama and Florida; that it carries the mail for the United States Government; that it forms connecting lines as authorized by the laws of the United States. The evidence shows that it will take more than an hour to change at the State line an engine equipped with an electric headlight of the kind provided for by this Act to an oil headlight and very much longer to change it to an acetylene light. There is some evidence to the effect that a much shorter time would be consumed, but this evidence is based upon the idea that the same size reflector could be used, and that the change to be made would simply be the taking out of the carbons and the electric light and putting in the place thereof the oil lamp. If the requirement of one State was the acetylene headlight, this evidence would not apply; or if the requirement was for a larger reflector or a deeper reflector than that provided by this Act, that evidence would not apply.

The testimony shows the original cost of a headlight, such as is prescribed by the Georgia Act, is approximately $250, and the cost of its operation and maintenance will run from $250 to $400 per year, or an average of

$325. (R. 42, 46.) The original cost of the oil headlight in use by the Railroad Company is $18, and the cost of its operation and maintenance $18.72 per year. (R. 47.) The Railroad Company has 671 engines, of which 115 are switch engines. (R. 39.) These main line engines are used interchangeably on all divisions and in all the six States into or through which the Railroad Company's system is operated, viz.: Virginia, North Carolina, South Carolina, Georgia, Florida and Alabama, its main lines therein having a total length of 4,607 miles. Its lines in Georgia alone, according to the Thirty-ninth Report of the Railroad Commission of Georgia, for the calendar year ending December 31, 1911, are 678.11 miles in length.

The enforcement of this Act will require an additional number of engines. It will require every engine running into Georgia to be equipped with a headlight of the kind described in the Act. If Georgia can pass this law, Virginia, North Carolina, South Carolina, Florida and Alabama can pass any other headlight law which may appeal to their respective Legislatures. There is no reason for supposing that South Carolina or the other contiguous States will adopt an Act exactly similar to the Act now under consideration. Several States, as shown by the documentary evidence, have already adopted headlight Acts. These provisions differ widely. In an Appendix to this brief we present a summary of the Headlight Laws of sixteen (16) States, and also the text of each, some of them passed before, but most of them passed since, the Georgia Act. The craze on the

subject of locomotive headlights appears to be of recent origin.

A headlight which complies with the Act of North Carolina, or the Act of South Carolina, or the Act of Florida will not comply with the Act of Georgia. It is entirely possible, if not probable, that some States (Virginia or Alabama, for instance) will order acetylene lights; that instead of requiring a reflector 23 inches in diameter, they will require one only 14 inches in diameter and of much greater depth. Mississippi has already adopted an Act as will be seen in the Appendix, requiring an electric headlight with a reflector not less than 18 inches in diameter, or 5 inches less than in Georgia. Other States may require the oil headlight. Still other States may require some different substance or may fix a different standard for the use of electricity. If a State can make any specific regulation on the subject at all, there is practically no end of the regulations which it may make. If South Carolina were to require an acetylene headlight and Georgia were allowed to require a light of the kind described in this Act, an engine running at night from South Carolina into Georgia must stop at the exact point where the State lines meet, which, at Augusta, would be in the middle of the Savannah River, and it will be impossible, if not entirely impracticable, to change engines, or to change headlights on engines, while on the bridge there across that river. The enforcement of this Act will require the establishment and maintenance of terminals at the State line crossings, and these terminals must be so established without regard to

whether the State line is crossed on a high trestle or bridge in the middle of a river, out in the woods, or at any other impracticable place.

If this Act is to be enforced, it will necessitate a redistricting of the divisions of each road. It will require the roads to change their distribution of motive power. It will prevent a quick moving of an engine from one State into another State, which is frequent, according to the evidence, when there is a demand for a large movement of perishable freight, such as strawberries, peaches, melons and tropical fruits.

It is impossible to contemplate this Act without concluding that it does regulate that feature of commerce which should be uniformly regulated; that it does disconnect that transportation which should be continuous.

The principles laid down in the case of *Hall* v. *De Cuir*, 95 U. S. 485-488, seem to be controlling, and we quote at length from that case:

> The line which separates the powers of the States from this exclusive power of Congress is not always distinctly marked, and oftentimes it is not easy to determine on which side a particular case belongs. Judges not infrequently differ in their reasons for a decision in which they concur. Under such circumstances it would be a useless task to undertake to fix an arbitrary rule by which the line must in all cases be located. It is far better to leave a matter of such delicacy to be settled in each case upon a view of the particular rights involved.
>
> But we think it may safely be said that State legislation which seeks to impose a direct burden upon interstate commerce, or to interfere directly with its freedom, does encroach upon the exclusive

power of Congress. The statute now under consideration, in our opinion, occupies that position. It does not act upon the business through the local instruments to be employed after coming within the State, but directly upon the business as it comes into the State from without or goes out from within. While it purports only to control the carrier when engaged within the State, it must necessarily influence his conduct to some extent in the management of his business throughout his entire voyage. His disposition of passengers taken up and put down within the State, or taken up within to be carried without, can not but affect in a greater or less degree those taken up without and brought within, and sometimes those taken up and put down without. A passenger in the cabin set apart for the use of whites without the State must, when the boat comes within, share the accommodations of that cabin with such colored persons as may come on board afterwards, if the law is enforced.

It was to meet just such a case that the commercial clause in the Constitution was adopted. The river Mississippi passes through or along the borders of ten different States, and its tributaries reach many more. The commerce upon these waters is immense, and its regulation clearly a matter of national concern. If each State was at liberty to regulate the conduct of carriers while within its jurisdiction, the confusion likely to follow could not but be productive of great inconvenience and unnecessary hardship. Each State could provide for its own passengers and regulate the transportation of its own freight, regardless of the interests of others. Nay, more, it could prescribe rules by which the carrier must be governed within the State in respect to passengers and property brought from without. On one side of the river or its tributaries he might be required to observe one set of rules and on the other another. Commerce can not flourish in the

midst of such embarrassments. No carrier of passengers can conduct his business with satisfaction to himself, or comfort to those employing him, if on one side of a State line his passengers, both white and colored, must be permitted to occupy the same cabin, and on the other be kept separate. *Uniformity in the regulations by which he is to be governed from one end to the other of his route is a necessity in his business, and to secure it Congress, which is untrammeled by State lines, has been invested with the exclusive legislative power of determining what such regulations shall be.* If this statute can be enforced against those engaged in interstate commerce, it may be as well against those engaged in foreign; and the master of a ship clearing from New Orleans for Liverpool, having passengers on board, would be compelled to carry all, white and colored, in the same cabin during his passage down the river, or be subject to an action for damages, 'exemplary as well as actual,' by any one who felt himself aggrieved because he had been excluded on account of his color.

This power of regulation may be exercised without legislation as well as with it. By refraining from action, Congress, in effect, adopts as its own regulations those which the common law or the civil law, where that prevails, had provided for the government of such business, and those which the States, in the regulation of their domestic concerns, have established affecting commerce, but not regulating it within the meaning of the Constitution. In fact, congressional legislation is only necessary to cure defects in existing laws, as they are discovered, and to adopt such laws to new developments of trade. As was said by Mr. Justice Field, speaking for the court in *Welton* v. *State of Missouri*, 91 U. S. 282, 'Inaction (by Congress) * * * is equivalent to a declaration that interstate commerce shall remain free and untrammeled.' Applying that principle to

> the circumstances of this case, congressional inaction left Benson at liberty to adopt such reasonable rules and regulations for the disposition of passengers upon his boat, while pursuing her voyage within Louisiana or without, as seemed to him most for the interest of all concerned. The statute under which this suit is brought, as construed by the State court, seeks to take away from him that power so long as he is within Louisiana; and while recognizing to the fullest extent the principle which sustains a statute, unless its unconstitutionality is clearly established, we think this statute, to the extent that it requires those engaged in the transportation of passengers among the States to carry colored passengers in Louisiana in the same cabin with whites, is unconstitutional and void. If the public good requires such legislation, it must come from Congress and not from the States.

Congress has heretofore enacted that every railroad company in the United States whose road is operated by steam, its successors and assigns, is hereby authorized to carry upon and over its roads, boats, bridges and ferries, all passengers, troops, Government supplies, mails, freight, and property on their way from any State to another State, and to receive compensation therefor, and to connect with the roads of other States so as to form continuous lines for the transportation of the same to the place of destination. (Sec. 5258, U. S. Com. Stat., 1901.)

In *Union Pacific Railway Co.* v. *Chicago, Rock Island & Pac. R'y Co.*, 163 U. S. 564, this court said:

> It is impossible for us to ignore the great policy in favor of continuous lines thus declared by Con-

> gress; and that it is in effectuation of that policy that such business arrangements as will make such connections effective are made.

In *Adams Express Co.* v. *Kentucky,* 214 U. S. 218, 223, and in *Atlantic Coast Line R. Co.* v. *Wharton,* 207 U. S. 328, 334, it was declared that any exercise of State authority in whatever form manifested, which directly regulates interstate commerce, is repugnant to the commerce clause of the Constitution.

It has been pointed out how the enforcement of this Act will break the continuous lines for transportation, which is in direct contravention of the policy thus established by the Government.

No State shall exercise the police power which either directly or indirectly affects interstate commerce where the subject-matter involved is such as to require or even to be susceptible of uniform regulation by the national government. (*Cooley* v. *Board of Wardens,* 12 Howard, 299.)

This court, in *Henderson* v. *Mayor of the City of New York,* 92 U. S. 259 reaffirms the decision in that case and quotes therefrom:

> Whatever subjects of this power are in their nature national, or admit of one uniform system or plan of regulation, may justly be said to be of such a nature as to require exclusive legislation by Congress.

This principle is again affirmed in *Bowman* v. *C. & N. W. R'y Co.,* 125 U. S. 465.

No State shall exercise its police powers so as to regulate interstate commerce. (*Welton* v. *Missouri*, 91 U. S. 275.)

The Missouri statute required venders of goods outside of the State to take out license. This court said in part:

> The fact that Congress has not seen fit to prescribe any specific rules to govern interstate commerce does not affect the question. Its inaction on this subject when considered with reference to its legislation with respect to foreign commerce is equivalent to a declaration that interstate commerce shall be free and untrammeled.

In *Henderson* v. *Mayor of the City of New York*, *supra*, this court said:

> Whenever the statute of a State invades the domain of legislation which belongs exclusively to the Congress of the United States, it is void, no matter under what class of powers it may fall, or how closely allied to powers conceded to belong to the States.

In *Western Union Telegraph Co.* v. *Kansas*, 216 U. S. 1, this court said:

> The authorities cited show that this court has guarded with both diligence and firmness the freedom of interstate commerce against hostile State or local action, as such action has been manifested by regulations operating, in some instances directly, in others indirectly, upon the means or instruments employed in that commerce.

2. But we come now to the discussion of the proposition that Congress has by its legislation already preempted and occupied the field of regulation of the same subject-matter as is covered by this Act of the Georgia Legislature, and that there is not such absence of legislation by Congress thereon as would justify or permit State legislation of this character, so far as locomotive engines used as instruments of interstate commerce are concerned.

By the Act of Congress of March 2, 1893, commonly known as the Safety Appliance Act, which is entitled "An Act to promote the safety of employes and travelers upon railroads by compelling common carriers engaged in interstate commerce to equip their cars with *automatic couplers* and *continuous brakes, and their locomotives with driving-wheel brakes,* and for other purposes," railroad companies engaged in interstate commerce are required to equip their cars with automatic couplers, with continuous power or air brakes, and their locomotives *with driving-wheel brakes.* (27 Stat. 531, U. S. Stats. 1901, p. 3174.) This Act requiring automatic couplers for cars was construed by this court to be applicable to locomotives. (*Johnson* v. *Southern Pacific Co.,* 196 U. S. 1.)

March 2, 1903, Congress amended this Act by providing that all of its provisions, including those regarding automatic couplers and grab irons, and prescribing the *height of drawbars,* shall apply to *locomotives* and tenders as well as to cars, and prescribes the percentage of cars in each train which must have their brakes used and

operated by the engineer of the locomotive, and that such percentage may subsequently from time to time be increased by action of the Interstate Commerce Commission. (32 Stat. 943, U. S. Com. Stats. 1901, Sup. 1911, p. 1314.)

May 27, 1908, appropriation was made in the sundry civil appropriation Act to enable the Interstate Commerce Commission to keep informed regarding compliance with the safety appliance Act, and to enforce the requirements of said Act, including the employment of inspectors, and authorizing the Commission to investigate, test experimentally, and report on the use and need of *any appliances* or systems intended to promote the safety of railway operation. (35 Stat. 324, c. 200.)

April 14, 1910, Congress supplemented the Safety Appliance Acts by an Act providing that all cars must be equipped with secure *sill steps* and efficient *hand brakes*, and all cars requiring secure *ladders* and secure *running boards* shall be equipped with such ladders and running boards, and all cars having ladders shall also be equipped with secure *hand holds* or *grab irons* on their roofs, at the tops of such ladders; and providing that within six months after the passage of that Act the Interstate Commerce Commission, after hearing, shall designate the number, dimensions, location and manner of application of the appliances provided for by Section 2 of said Act and Section 4 of the original Safety Appliance Act, and that thereafter said number, location, dimensions and manner of application, as designated by

the Commission, shall remain as the standard of equipment to be used on all cars subject to the provisions of said Act, unless changed by an order of the Commission; and the Commission was also given authority to modify or change and to prescribe the standard height of drawbars, and to fix the time within which such modifications shall become effective and obligatory, and making it unlawful to use any car or vehicle in interstate traffic which does not comply with the standard so fixed by the Commission. (36 Stat. 298, c. 160.)

Under the authority vested in the Commission by the foregoing Act that body, after full hearing, on March 13, 1911, promulgated elaborate rules and regulations prescribing the number, dimensions, location and manner of application of the appliances provided for by Section 2 of said Act of April 14, 1910, and Section 4 of the original Act of March 2, 1893, in a pamphlet containing 37 printed pages, of which the last nine pages are devoted to "Steam Locomotives Used in Road Service," "Steam Locomotives Used in Switching Service," and "Specifications Common to All Steam Locomotives."

Among the rules and regulations under the second heading is the following (p. 33):

HANDRAILS AND STEPS FOR HEADLIGHTS:

Switching locomotives with sloping tenders with manhole or headlight located on sloping portion of tender shall be equipped with secure steps and handrail or with platform and handrail leading to such manhole or *headlight*.

Among those under the last heading we find the following (p. 37):

> HANDRAILS AND STEPS FOR HEADLIGHTS:
>
> Locomotives having headlights which can not be safely and conveniently reached from pilot-beam or steam chests shall be equipped with secure handrails and steps suitable for the use of men in getting to and from such *headlights*.

The order of the Commission dated March 13, 1911, designating the number, dimensions, location, and manner of application of certain safety appliances, under these three heads pertaining to locomotives, will be found in the Appendix to this brief.

May 6, 1910, an Act was passed requiring all common carriers engaged in interstate commerce to make full reports to the Interstate Commerce Commission of all collisions, derailments, or other accidents resulting in injury to persons, equipment, or roadbed, arising from operation, and providing that the Interstate Commerce Commission shall have authority to investigate all such collisions, derailments, or other accidents, and providing that the Commission, when it deems it to be to the public interest, shall make reports of such investigations, stating the cause of accident, together with such recommendations as it deems proper. (36 Stat. 350, c. 208.)

The Act of March 2, 1903, amending the Safety Appliance Act, provides that said Act as amended "shall be held to apply to common carriers by railroads in the territories and the District of Columbia, and shall apply

in all cases, whether or not the *couplers* brought together are of the same kind, make or type; and the provisions and requirements hereof and of said Acts relating to *train brakes, automatic couplers, grab irons,* and the *height of drawbars* shall be held to apply to all trains, *locomotives,* tenders, cars, and similar vehicles used on *any railroad engaged in interstate commerce,* and in the territories and the District of Columbia, and to *all other locomotives, tenders, cars, and similar vehicles used in connection therewith.*"

May 30, 1908, Congress passed an Act entitled, "An Act to promote the safety of employes on railroads," which made it unlawful on and after January 1, 1910, for any common carrier engaged in interstate or foreign commerce by railroad to use any *locomotive* in moving interstate or foreign traffic, not equipped with an *ash pan* which can be dumped or emptied and cleaned without the necessity of any employe going under such locomotive, but it was provided therein that nothing in said Act contained should apply to any locomotive upon which, by reason of the use of oil, electricity, or other agency, an ash pan is not necessary. (35 Stat. 476.)

February 17, 1911, an Act entitled "An Act to promote the safety of employes and travelers upon railroads by compelling common carriers, engaged in interstate commerce, to equip their *locomotives* with safe and suitable *boilers* and appurtenances thereto," was passed providing how such locomotive boilers should be equipped, inspected, etc., under rules and instructions to be prescribed by the Interstate Commerce Commission.

(U. S. Com. Stats., 1901, Supp. 1911, pp. 1333-1338.) "Rules and Instructions for the Inspection and Testing of Locomotive Boilers and their Appurtenances," prescribed by that body were promulgated by it on June 2, 1911, for the observance of all such carriers, in a pamphlet containing 20 printed pages.

It would seem to be clear from the foregoing enactments that Congress has already taken practically complete possession of the field of regulating the safety appliances of cars and locomotives used by railroads engaged in interstate commerce; and by the Acts of May 27, 1908, and May 6, 1910, has provided a method for gathering data necessary to enable it to determine whether or not, and what, additional legislation by it is needed in the interest of the safety of railway employes and travelers upon interstate railroads.

In addition to the legislation just mentioned directly regulating equipment, including locomotives, Congress has also passed, to further provide for the safety of passengers and employes on interstate railroads, an Act regulating the hours of service of employes on such railroads and an Act prescribing the liability of railroad employers to their employes, for negligence resulting in personal injury or death.

In *Southern R'y Co.* v. *United States,* 222 U. S. 20, it was held that the Safety Appliance Act of Congress, as amended, embraces all *locomotives,* cars, and similar vehicles used on any railway that is a highway of interstate commerce, and is not confined exclusively to vehicles engaged in such commerce. And that the power

of Congress under the commerce clause of the Constitution is plenary, and competent to protect persons and property moving in interstate commerce from all danger, no matter what the source may be, and to that end Congress may require all vehicles moving on highways of interstate commerce to be so equipped as to avoid dangers to persons or property moving in interstate commerce.

In *Northern Pacific R'y Co.* v. *State of Washington*, 222 U. S. 370, it was held that the right of a State to apply its police power to subjects under the exclusive control of Congress, but in regard to which Congress has been silent, ceases as soon as Congress acts on the subject and manifests its purpose to call into effect its exclusive power; and that Congress, by enacting a statute in regard to a subject within its exclusive power, manifests its purpose to call that power into effect, and at once removes that subject from the sphere of State action. We submit that Congress, by the numerous Acts to which we have referred, has undoubtedly manifested its purpose to call that power into effect in regard to the subject of regulating the equipment, including locomotives, of interstate railways for the promotion of the safety of passengers, property, and their employes.

Congress in the Acts hereinabove referred to has legislated upon, regulated, and provided specifically for certain safety appliances and parts of all interstate railroad cars and locomotives, viz.: power driving-wheel brakes and appliances for operating the train brake system (in other words, air-brakes), automatic couplers

or drawbars, with standard and maximum height fixed by the Commission, hand brakes, grab irons or hand holds, sill steps, ladders, running-boards, ash pans, and boilers. In thus regulating these instruments of interstate commerce Congress has manifested its purpose and intention of dealing with the subject-matter of cars and locomotives, the manner, extent, and nature of the safety appliances entering into the equipment of the same for active service, to the exclusion of all State legislation upon the same subject-matter. In other words, Congress has pre-empted and occupied the field of regulation of such matters, and the power of the States to legislate thereon has ceased to exist, if it existed before Congress acted.

It seems to us to be taking too narrow a view of the power of Congress in this respect to say the States may continue to adopt and enforce regulative legislation as to every part of the machinery or appliances entering into and making up the complete locomotive engine operated upon an interstate railroad, so long as Congress has not enacted or provided for a regulation of such particular part; or, in other words, that so long as Congress does not prescribe the kind and dimensions of locomotive headlights used in interstate commerce, the States may do so in any manner they may deem necessary or proper, without limitation or restriction, and regardless of the confusion, obstruction to transportation, and financial loss such conflicting enactments will inevitably produce.

The locomotive must be treated as a unit. All its component parts constitute but one complete instrumen-

tality employed in the transportation of interstate commerce. Its power-driving-wheel brakes, its automatic couplers or its drawbars of standard height, its uncoupling levers, its hand brakes, its grab irons, its hand holds, its sill steps, its ladders, its running boards, its ash pan, and its boiler, are all regulated by Congress directly or through the Interstate Commerce Commission in pursuance of the power and authority delegated to that body under the general head of "safety appliances," but its bell, its whistle, its headlight, and many other parts may likewise be classed under that head, and can not be logically, consistently, or lawfully longer regarded as within the domain of State regulation. In the very nature of things, such power of regulation is indivisible and its exercise must be uniform. That power to regulate having been assumed and asserted by Congress over some—the larger number—of the safety appliances of locomotives, the whole field of regulation pertaining thereto must be left open, free, and unobstructed for the further exercise of that paramount power under the commerce clause of the Constitution.

It is inconceivable that the State's police power to regulate may continue until Congress has, for example, legislated specifically concerning the mechanism, dimensions, and material of the smallest bolt or screw entering into the manufacture of the pilot or "cow-catcher" of a locomotive operated in interstate commerce. Yet that is what the argument in behalf of the State in this case logically leads to.

The fact that Congress has so far not deemed it wise or necessary to adopt specific legislation concerning headlights on locomotives used in interstate commerce does not by any means license the States to legislate as to that particular appliance of such a locomotive. On the contrary, we may well conclude, from the absence of such specific legislation by Congress, while that body has by the Acts above referred to regulated almost every other appliance or portion of such locomotives, that the kind and dimensions of such headlights are at present intended to be free from all legislation, and left as they have been since railroads were first constructed in this country, to the judgment and sound discretion of those skilled and experienced in the operation and management of our great interstate systems of rail transportation.

Furthermore, we have seen by the Act of May 27, 1908, Congress has delegated all such matters involving railroad safety appliances to the investigation and report of the Interstate Commerce Commission. Meantime, the States have no power by legislation to obstruct, interfere with, trammel, or forestall the work of said Commission or the orderly manner of dealing with the subject of safety appliances generally, mapped out as aforesaid by Congress. Nor has the Commission been inactive, under the power and authority conferred upon that body by said Act of May 27, 1908, which provides as follows:

> Hereafter the Interstate Commerce Commission shall be, and is, hereby authorized, at its discretion, to investigate, test experimentally, and report on the use and need of *any* appliances or systems intended

> to promote the safety of railway operation which may be furnished in completed shape to such Commission for such investigation and test entirely free of cost to the Government. For this purpose the Commission is authorized to employ persons familiar with the subject to be investigated and tested, and may also make use of its regular employes for such purposes.

The investigations and reports concerning the use and need of "any appliances or systems intended to promote the safety of railway operation" have been mainly left by the Commission to five experts employed by that body known as the "Block Signal and Train Control Board," first organized in July, 1907, which has since made annual reports to the Commission. In the Twenty-fourth Annual Report of the Commission to Congress, published under date of December 21, 1910 (pp. 44-47), reference is made to the work of said Board in the special investigations and examinations made by its members of divers and sundry devices and appliances, including "locomotive headlights." (p. 45.) The Third Annual Report of said Board is made part of the Commission's said report for 1910 (pp. 173-189.) The court's attention is called particularly to what said Board stated therein on the subject of "Headlights" (pp. 175-176), the latter part of which we quote here as follows (p. 176):

> Very strong objections are made to the use of high-power headlights, for the reason that the rays are so intense as to impair seriously for several seconds the vision of persons who may look into the beam. This effect, when experienced by enginemen of trains running in the opposite direction on par-

allel tracks, is considered by many to be serious. It has long been known that after a locomotive fireman has looked into the fire box for even a very few seconds in putting on coal the scotoma which persists for some seconds afterwards makes his reading of signals at night very unreliable until its effect has had time to pass off. As regards the effect of the highpower beam upon the vision of the men riding on the engine on which the electric headlight is used it has been found in some rather extensive tests that the rays were sufficiently powerful to reflect back from the surfaces of the roundels of semaphore signals an amount of light sufficient to overpower the light transmitted by the signal lamps themselves. The spectrum of the electric arc is very rich in blue and green rays and contains a relatively small proportion of the red and yellow; hence rays from the arc light reflected from the surface of the colored roundel would tend to diminish the resultant proportion of red in the light, and if reflected back from a green roundel would intensify its color. Very deceptive effects of this kind have been noticed by many observers, and while apparently such conditions may be dangerous as leading to erroneous reading of a signal light, they are largely counteracted by the fact that the high power of the light serves to reveal at a considerable distance the position of the signal arm. The usual rules governing enginemen in their interpretation of signal indications state that the indications will be displayed by day by positions of the semaphore arm, and in addition at night by lights of prescribed color, the effort being made to train the enginemen in so far as possible to depend upon position rather than upon color.

In the case of classification signals—that is, the colored lamps used on the front end of engines to indicate whether the train is an extra rather than a regular train, or whether it is running in two or more sections—the condition is much more liable to

cause a misunderstanding of signals for the reason that classification signals are color signals purely, and are not signals of position. So difficult is it to read classification signals correctly when viewed in the beam of an electric headlight that railroads have made strenuous objection to their use on this account alone.

The whole question at the present time is in a highly controversial state. So far as opinion has at all crystalized, it appears to be as follows:

On single-track roads, particularly those in mountainous country or where fixed signals are infrequent, the high-power headlight on a train affords a warning of its approach for a considerable distance, and under favorable circumstances it enables the engineman to distinguish obstructions or unusual objects on the track much farther ahead than is possible with ordinary lights.

On double-track roads, and particularly on roads having three or four tracks and equipped with signals placed at frequent intervals, the prevailing opinion seems to be that *the electric headlight is not only unnecessary, but is likely to cause serious errors on the part of enginemen in reading color signal lights.*

The Block Signal and Train Control Board made its final report to the Interstate Commerce Commission, June 29, 1912, from which we quote as follows (pp. 14-15):

HEADLIGHTS.

The board has had submitted to it a number of plans and descriptions of locomotive headlights and devices for enabling such lights to be moved so that the beam of light may be thrown upon a curved track ahead. In some of these devices an attempt is made to control the movement of the headlight about a vertical axis by the swiveling of the forward truck

of the engine or by centrifugal action. Others are controlled manually, either by direct mechanical connections or through the medium of compressed air.

From a study of the devices submitted, the board believes that it is not practicable properly to control the direction of a headlight beam through the swiveling of the trucks or by any relation of the train or engine to the track upon which it is running, but that simple mechanical means may readily be designed to swing the headlight so that the engineman may, within limits, have complete control over the direction of the beam.

Considering the headlight from the standpoint of illumination, it is found in practice that very few oil headlights give a sufficiently brilliant light to illuminate the track far enough ahead of the engine to enable an obstruction to be discovered and the train brought to a stop before reaching it. There seems to be no sound reason, however, why by the use of properly designed reflectors and lenses the oil headlight can not be made to give a much better light than it generally affords. The so-called high-power headlights use electric current or acetylene gas. The electric apparatus is somewhat more complicated than that required for the gas headlight. It is not believed that the danger of explosion from the use of the acetylene headlight is sufficient to militate against its use. The amount of light from either is believed to be ample. As a general conclusion regarding locomotive headlights, the board believes that a headlight should be considered either as simply a marker to indicate to stationmen and other persons concerned the approach of a train or, if it is to be used as more than a marker and is intended to be used for the detection of obstructions on the track at a sufficient distance to enable a train to be brought to a stop after they are sighted, the headlight should be a high-power light having both the direction and intensity of the beam controllable by the engineman.

The control of the direction of the beam enables the engineman to illuminate curved track ahead and throw light along the slopes of cuts where landslides are likely to occur. The control of the intensity of the beam by the engineman directly from the cab is regarded as a necessity, as when meeting or passing other trains and for preventing improper reading of fixed or classification signals. Perhaps the most common and the most weighty objection to the use of high-power headlights is that an engineman running in one direction is dazzled by the light of an engine coming toward him. To meet this objection it is deemed important that every high-power headlight should be so arranged that the engineman can occult it at will.

Apropos of the need of a deflectable headlight, commented on in the foregoing extract from the report of said Board, we quote from a recent number of the Railway Age Gazette the following:

That rigid headlights on locomotives are unsatisfactory on curves has long been known. They throw the light where it is not needed and leave the track ahead in darkness. This defect was emphasized a short time ago in causing the loss of a man's life. On his way home at night he dodged a train, and stepped into a frog, which, according to the report, was located on a sharp curve; he was unable to withdraw his foot in time to escape a second train.

No doubt if the man had observed the rules of the company concerning trespassing he would not have been there, but the fact nevertheless remains that an easily controlled, deflectable headlight that would throw light straight ahead when in its normal position, and to either side, at the will of the engineer, is highly desirable. It is believed that automobiles will soon be fitted with lights of this kind and that its use may be extended to the locomotive.

> To design and build such a contrivance would surely be simple.

It will be observed that the Georgia Headlight Act makes no provision for such a device.

Appropriations of large sums have been made by Congress from year to year to carry on and keep up the investigations, experimental tests, etc., contemplated with respect to safety appliances by the Act of May 27, 1908, provision on that account for the fiscal year ending June 30, 1912, having been made by the Sundry Civil Appropriations Act, approved March 4, 1911. (36 Stat., c. 285, Sec. 1, p. 1397.)

In *Southern R'y Co.* v. *Reid,* 222 U. S. 424, there was involved the validity of a statute of North Carolina requiring agents of railroad companies to receive freight for transportation when tendered at a sidetrack or any warehouse thereon and to forward the same under a heavy penalty for each day of refusal to do so. In the opinion of Mr. Justice McKenna, after citing certain provisions of the Act to regulate commerce, it is stated (p. 442):

> By these provisions Congress has taken possession of the field of regulation, with the purpose, which we have already pointed out, to keep under the eye and control of the Commission the rates charged and the actions of the railroads in regard to them, to secure their reasonableness and to secure their impartial application.

Substantially the same ruling is made in the case of *Southern R'y Co.* v. *Reid & Beam,* 222 U. S. 444, decided on the same day, wherein this court said:

We have shown in the opinion in No. 487 (*Southern R'y Co.* v. *Reid, supra*) that there need not be directly "inhibitive congressional legislation," but congressional legislation which occupies the field of regulation, and thereby excludes action by the State.

In *Second Employers' Liability Cases*, 223 U. S. 1, this court in the course of the opinion by Mr. Justice Van-Devanter said (p. 55):

> And now that Congress has acted, the laws of the State, in so far as they cover the same field, are superseded, for necessarily that which is not supreme must yield to that which is.
>
> (See also *Michigan Central R. R. Co.* v. *Vreeland*, 227 U. S. 59.)

In *Northern Pacific R'y Co.* v. *State of Washington*, 222 U. S. 370, there was involved the validity of an Act of the State of Washington regulating the hours of service of employes on an interstate train. The violation of the State statute was claimed to have been committed after the passage of the Act of Congress on the same subject, but before it became effective.

In the syllabus of that decision the propositions decided, pertinent to the instant case, are stated as follows:

> The right of a State to apply its police power to subjects under the exclusive control of Congress, but in regard to which Congress has been silent, ceases as soon as Congress acts on the subject and manifests its purpose to call into effect its exclusive power.
>
> Congress by enacting a statute in regard to a subject within its exclusive power manifests its purpose to call that power into effect, and at once removes that subject from the sphere of State action,

> and even if Congress provides that the statute shall not go into effect until a subsequent date, the States lose control of that subject during the intermediate period from the enactment to the active operation of the statute.

The principle there announced by this court is applicable here. Although Congress has already by the Acts hereinabove referred to occupied the field of regulating safety appliances to be attached to and used on cars and locomotives engaged in interstate commerce sufficiently, as we claim, to exclude all State legislation having that object, it has gone still further, and by the Act of May 27, 1908 (34 Stat. 324, c. 200), has authorized and empowered the Interstate Commerce Commission "to investigate, test experimentally, and report on the use and need of *any* appliances or systems intended to promote the safety of railway operation."

Now, using the language of Chief Justice White in the opinion last cited (p. 378):

> The right of a State to apply its police power for the purpose of regulating interstate commerce in a case like this, exists only from the *silence* of Congress on the subject, *and ceases when Congress acts on the subject or manifests its purpose to call into play its exclusive power.*

We maintain that Congress has not only acted in the legislation above referred to upon the subject of "safety appliances" for interstate locomotives and cars, but it has manifested (by said Act of May 27, 1908) "its purpose to call into play its exclusive power," over any and all other such appliances, which it has not heretofore

dealt with specifically, as the need therefor may appear from time to time in the investigations and reports of the Interstate Commerce Commission. Meantime, the power of the States over the subject of all such safety appliances has ceased and determined.

That the headlight of a locomotive is a "safety appliance" is beyond question. The Supreme Court of Georgia, in its opinion delivered in response to the questions propounded to it by the Court of Appeals in this case, used the following language in justifying the discrimination made by this Act between different classes of railroads (R. 112):

> The danger of operating such roads (referring to tram roads, mill roads, etc.) without proper *safety appliances* is not so great as that attending the operation of ordinary railroads doing a general passenger and freight business for the public.

In a number of cases recently decided by this court it was decided that the legislation by Congress enacted June 29, 1906, on the liability of carriers for loss of and damage to interstate shipments, contained in what is known as the Carmack Amendment to Section 20 of the Act to Regulate Commerce, supersedes all regulations and policies of any particular State upon that subject; that only the silence of Congress theretofore authorized the exercise of the police power of the State upon that subject, and when Congress exercises its authority the regulating power of the State is at an end; and that in enacting said amendment it is evident that Congress intended to adopt a uniform rule as to the lia-

bility imposed upon interstate carriers by their bills of lading and relieve them from the diverse regulations to which they had theretofore been subject. (*Adams Express Co.* v. *Croninger*, 226 U. S. 491; *Chicago, Burlington & Quincy R'y Co.* v. *Miller, Ib.* 513; *Chicago, St. P. M. & O. R'y Co.* v. *Latta, Ib.* 519.)

Again, in another case decided by this court at the same time as the last three cases cited, the validity of a statute known as the Minnesota Reciprocal Demurrage Law, effective July 1, 1907, was involved. After quoting certain provisions of the Act to Regulate Commerce to show that Congress had by its legislation covered the same subject as this State statute, so far as the furnishing of cars for interstate traffic was concerned, Chief Justice White concluded his opinion as follows:

> As legislation concerning the delivery of cars for the carriage of interstate traffic was clearly a matter of interstate commerce regulation, even if such subject was embraced within that class of powers concerning which the State had a right to exert its authority in the absence of legislation by Congress, it must follow in consequence of the action of Congress to which we have referred that the power of the State over the subject-matter ceased to exist from the moment that Congress exerted its paramount and all-embracing authority over the subject. We say this because the elementary and long settled doctrine is that there can be no divided authority over interstate commerce and that the regulations of commerce on that subject are supreme. It results, therefore, that in a case where from the particular nature of certain subjects the State may exert authority until Congress acts under the assumption that Congress by inaction has tacitly authorized

it to do so, action by Congress destroys the possibility of such assumption, since such action, when exerted, covers the whole field and renders the State impotent to deal with *a subject over which it had no inherent, but only permissive power. Southern R'y Co.* v. *Reid,* 222 U. S. 424.

(*Chicago, Rock Island & Pac. R'y Co.* v. *Hardwick Farmers Elevator Co.,* 226 U. S. 426.)

The State statute requiring the heating of steam passenger cars by the use of steam, hot water, or hot air from the locomotive, the validity of which was challenged as a regulation of interstate commerce, in the case of *N. Y., N. H. & H. R. Co.* v. *New York,* 165 U. S. 628, was enacted originally June 18, 1887, and amended April 27, 1888; and the complaint against the railroad company in that case charged daily violations thereof from November 2, 1888, to December 31, 1888. The first Safety Appliance Act of Congress applicable to cars and locomotives used in interstate commerce was not enacted until March 2, 1893. Hence, this court in upholding said statute as valid said (p. 632):

> *Until* displaced by such legislation as Congress may rightfully establish under its power to regulate commerce with foreign nations and among the several States, the validity of the statute, so far as the commerce clause of the Constitution of the United States is concerned, can not be questioned.

So, Mr. Justice Harlan in delivering the opinion of this court in *Chicago, Rock Island & Pacific R'y Co.* v. *State of Arkansas,* 219 U. S. 453, sustaining the State statute, known as the "Full Crew Act" (Arkansas Laws, 1907), requiring railroad companies to equip each freight

train of twenty-five cars or more with a crew consisting of not less than an engineer, fireman, conductor, and three brakemen, was careful, to say (p. 466):

> Undoubtedly, Congress, in its discretion, may take entire charge of the whole subject of the equipment of interstate cars, and establish such regulations as are necessary and proper for the protection of those engaged in interstate commerce. *But it has not done so in respect to the number of employes* to whom may be committed the actual management of interstate trains of any kind. *It has not established any regulations on that subject*, and *until* it does, the statutes of the State, not in their nature arbitrary, and which really relate to the rights and duties of all within the jurisdiction, must control.

But in the instant case, we have seen that Congress has established divers and sundry regulations on the subject of *safety appliances* on cars and locomotives employed in interstate commerce, thus displacing and superseding the power of the States over that subject.

In *N. Y. C. & H. R. R. Co.* v. *Board of Freeholders, County of Hudson*, decided by this court February 24, 1913, the appellees adopted two ordinances, one fixing the rate for foot passengers ferried from New Jersey to New York, and the other for a round trip commencing on the New Jersey shore, which rates were applicable to certain steam ferries across the Hudson River, known as the West Shore Railroad Ferries, which are operated as railroad ferries, but their business is not limited to incoming persons or traffic carried over the lines of the railroad or to persons or traffic conveyed from New York to Weehawkin to be transported from there over the rail-

road. In other words, from both directions a very large number of persons, besides considerable traffic, constantly move to and fro between the two States, not having used or intending to use the lines of the West Shore Railroad. It was contended that these ordinances were an unwarranted interference with the interstate business of the company and the enforcement of the same would constitute a direct burden on such commerce, which could not be done consistently with the Constitution. The Supreme Court of New Jersey maintained the contentions of the railroad company, but the Court of Errors and Appeals reversed that judgment (76 N. J. Law 664). The decision of this court turned on the proposition whether Congress had legislated on the subject of interstate ferries and thus excluded the power of the State of New Jersey or the appellees acting under the authority of that State to fix rates upon passengers and property transported by said ferries between the two States.

The language of Section 1 of the Act to regulate commerce as amended June 29, 1906 (24 Stat. 379) was quoted by this court as follows:

> The term 'railroad' as used in this Act shall include all bridges and *ferries* used or operated in connection with any railroad and also all the road in use by any corporation operating a railroad, whether owned or operated under a contract, agreement, or lease.

Mr. Chief Justice White who delivered the opinion of this court then proceeds to say:

> The inclusion of railroad ferries within the text is so certain and so direct as to require nothing but a consideration of the text itself. Indeed, this inevitable conclusion is not disputed in the argument for the defendant in error, but it is insisted that as the text only embraces railroad ferries and the ordinances were expressly decided by the court below only to apply to persons other than railroad passengers, therefore the action by Congress does not extend to the subject embraced by the ordinances. But as all the business of the ferries between the two States was interstate commerce within the power of Congress to control and subject in any event to regulation by the State as long only as no action was taken by Congress, the result of the action by Congress leaves the subject, that is, the interstate commerce carried on by means of the ferries, free from control by the State.

The judgment of the court below was, therefore, reversed.

It will be observed by the court the same section of the Act to Regulate Commerce declares that:

> The term 'transportation' shall include *cars and other vehicles and all instrumentalities and facilities of shipment or carriage,*

which would necessarily include locomotives and all appliances thereon or connected therewith when employed in interstate commerce.

In conclusion we desire to say that while it does not appear of record herein, by stipulation in writing between the Attorney General of the State of Georgia and counsel representing the plaintiff in error and other railroad companies operating their lines in that State, it has

been agreed that this is to be a test case as to the validity of the Act in question, and that pending this writ of error no proceedings were to be instituted or prosecuted against the plaintiff in error or those companies which declined to comply with the terms of said Act.

Upon the grounds urged and the authorities cited we ask the court to reverse the judgment of the court below, with direction to reverse the judgment of the City Court of Richmond County, Georgia, and that the latter court be directed to dismiss the accusation instituted in the name of the defendant in error for a violation of the so-called Georgia Headlight Act.

All of which is respectfully submitted.

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APPENDIX

HEADLIGHT LAWS.

Legislation prescribing the character of headlight to be used on locomotives, has been enacted in sixteen States.

The text of these Acts is appended as Exhibit No. 1.

Below is a SUMMARY OF HEADLIGHT LAWS IN THE SEVERAL STATES.

ELECTRIC:

(1) Headlight of 1,500 candle power, measured without reflector:

Arizona (effective November 10, 1912).

(2) Headlight consuming 300 watts at the arc:

Georgia (23 in. reflector required), effective July 1, 1909.

Mississippi (18 in. reflector required), effective January 1, 1913.

(3) Headlight of design approved by Railway Commission:

Washington.

NOT NECESSARILY ELECTRIC:

(4) Headlight of 1,500 candle power, measured without reflector:

Indiana.	Oklahoma.
Montana.	South Dakota.
North Carolina.	Texas.

(5) Headlight of 1,500 candle power:

Arkansas.

(6) Headlight of 2,500 candle power:

Florida.

(7) Headlight of 10,000 candle power, measured with reflector, or sufficient to distinguish an object the size of a man at a distance of 800 feet:

South Carolina (Laws of 1912).

(8) Headlight sufficient to distinguish an object the size of a man at a distance of 800 feet by a person of normal vision:

Kansas. Wisconsin.

(9) Headlight sufficient to distinguish whistling posts, land marks and other warning signs at a distance of 350 feet:

Ohio.

The penalties for violation of these laws vary from a minimum of $100 to a maximum of $1,000 for each offense.

In Missouri the Governor received assurances from the Missouri railroads that they would equip and keep equipped ready for use on all locomotives used in main line road service in the State of Missouri, headlights of power sufficient to outline the figure of a man on or adjacent to the track visible at a distance of eight hundred feet from the locomotive.

Attention is directed to the wide difference in the provisions of these Acts. Some are electric, others may or may not be; some must be with the aid of a reflector, and others without, while the candle power provided for ranges from 1,500 all the way to 10,000, the latter power being required in South Carolina. These differences render it impossible for railways operating in more than one State to make use of appliances, standard in one State, in others through which they run.

EXHIBIT No. 1.

ARIZONA—Laws of 1912.

Section 1. It shall be the duty of every railroad corporation or receiver or lessee thereof operating any line of railroad in this State, within six months after the passage of this Act, or within such additional time as may be prescribed by order of the Corporation Commission of Arizona, after such railroad has made a proper showing of its inability to comply, to equip all locomotive engines used in the transportation of trains over said railroad with electric headlights of not less than 1,500 candle power, measured without the aid of a reflector: *Provided,* that this Act shall not apply to locomotive engines regularly used in the switching of cars or trains.

Section 2. Any railroad company or receiver or lessee thereof doing business in the State of Arizona, which shall violate the provisions of this Act shall be liable to the State of Arizona for a penalty of not less than $100 nor more than $1,000 for each offense, and suit shall be brought to recover such penalty in a court of competent jurisdiction in the name of the State of Arizona, by the Attorney General or by the county attorney of any county in or through which said railroad may be operated.

Section 3. All Acts and parts of Acts in conflict with the provisions of this Act are hereby repealed.

Approved May 10, 1912.

ARKANSAS—Act No. 402.

Section 1. Any company, corporation or officer of court, owning or operating a railroad over fifty miles in length, in whole or in part, within this State, shall be required to equip, maintain and use, upon each and every locomotive being operated in road service in the State in the nighttime, a headlight of power and brilliancy of 1,500 candle power.

Section 2. Any company, corporation or officer of court owning or operating a railroad over fifty miles in length, in whole or in part within this State, violating the provisions of this Act, shall be liable on conviction to a penalty of a fine of not less than $300 nor more than $500 for each separate offense, which shall be recovered in a civil action in the name of the State.

Acts of 1907.

FLORIDA—Acts of 1911.

CHAPTER 6234.

Section 1. On and after October 1, 1911, all railroad locomotives operated in this State in the service of drawing passenger or freight trains shall be equipped with a first class headlight of not less than 2,500 candle power, which headlight shall be kept in good condition and used by those operating such railroad locomotives. That any person, firm or corporation who shall fail to so equip their or its locomotives in drawing passenger or freight trains, as herein required, or shall operate and use a

locomotive in drawing passenger or freight trains not equipped with a headlight as required by this Act, shall be guilty of a misdemeanor and shall upon trial and conviction be fined not more than $1,000 or imprisoned not exceeding twelve months.

Approved May 23, 1911.

GEORGIA—Act No. 537.

Section 1. Be it enacted by the General Assembly of Georgia, and it is hereby enacted by authority of the same, That all railroad companies are hereby required to equip and maintain each and every locomotive used by such company to run on its main line after dark with a good and sufficient headlight which shall consume not less than three hundred watts at the arc, and with a reflector not less than twenty-three inches in diameter, and to keep the same in good condition. The word main line as used herein means all portions of the railway line not used solely as yards, spurs and side tracks.

Section 2. Be it further enacted, That any railroad company violating this Act in any respect shall be liable to indictment as for a misdemeanor in any county in which the locomotive not so equipped and maintained may run, and on conviction shall be punished by fine as prescribed in Section 1039, of the Code of 1895.

Section 3. Be it further enacted that this Act shall go into effect July 1, 1909.

Section 4. *Provided*, This Act shall not apply to tramroads, mill roads, and roads engaged principally in

lumber or logging transportation in connection with mills.

Section 5. Be it further enacted, That all laws and parts of laws in conflict with this Act, be and the same are hereby repealed.

Approved August 17, 1908.

INDIANA.

Chapter 128.

Section 1. *Be it enacted by the General Assembly of the State of Indiana,* That, in addition to the powers heretofore granted to the Railroad Commission of Indiana that said Commission be, and it is hereby specifically empowered, authorized and directed, as soon as practicable after the passage of this Act, to investigate the conditions and efficiency of headlights now in use on locomotive engines on the railroads in this State, and if found to be inadequate for the protection of persons and property, or any other purpose, to investigate and determine what would be the most practicable and efficient headlight for all purposes, and when the commission shall have so determined, to make and enforce against the railroad companies such order or orders as may be found to be necessary to require the equipment and installation of such headlights on the locomotives on the railroads in this State, and to this end said commission is given power in such investigation to examine the various kinds of lights that may be suitable for locomotive headlights and appliances therefor, to consult experts in such mat-

ters and to require the attendance of witnesses and the production of papers, documents, and appliances.

Approved March 6, 1909.

It is Therefore Ordered, That in the place of said headlights every railroad corporation or receiver or lessee thereof operating any line of railroad in this State shall equip all locomotive engines used in the transportation of same over the said railroads with headlights of not less than 1,500 candle power: *Provided,* this order shall not apply to locomotives regularly used in the switching of cars or trains.

It is Further Ordered, That all of said Railroad Companies shall equip one-third of their said road engines with said headlights by the first day of July, 1910, an additional one-third of their said engines by the first day of January, 1911, and the remaining one-third by the first day of July, 1911.

Commission Order 322, January 6, 1910.

(This order has been adjudged void for uncertainty and indefiniteness by the Circuit Court of the United States for the District of Indiana in the suit of Baltimore & Ohio R. R. Co. v. Railroad Commission of Indiana, 196 Fed. 690, 699.)

KANSAS—Acts of 1911.

Chapter 241.

Section 1. On and after January 1, 1912, it shall be the duty of every company, corporation, lessee, manager or receiver owning or operating a railroad in the State of

Kansas, to equip and maintain and use upon each and every locomotive engine being operated in road service within the State of Kansas a headlight of a power that will outline the figure of a man on or adjacent to the track, plainly visible at a distance of 800 feet, preceding the locomotive. The visibility herein mentioned is understood to be measured by and under ordinary night conditions, and for the normal sight of a person having the usual visual capacity required of a locomotive engineer at his place in charge of a moving locomotive: *Provided,* That this Act shall not apply to engines running not more than ten miles into the State to complete their runs: *And Provided Further,* That this Act shall not apply to engines used in switching service: *And Provided Further,* That this Act shall not apply to locomotive engines used exclusively between sunup and sundown, nor on engines going to or returning from repair shops when ordered to such shops for repair.

Section 2. Any railroad company or the receiver, lessee, manager or superintendent thereof, violating the provisions of Section 1 of this Act, or who permits this Act to be violated when within his official authority to prevent its violation, shall be guilty of a misdemeanor and upon conviction shall be fined not less than $100 nor more than $500 for each offense, and the operation of one engine for any part of one day in violation of this Act shall be construed to be a complete misdemeanor.

Approved March 14, 1911.

MISSISSIPPI—Acts of 1912.

CHAPTER 153.

Section 1. *Be it enacted by the Legislature of the State of Mississippi:* That all railroad companies operating or doing business in this State are hereby required to equip and maintain each and every locomotive used by such companies to run on its main line between sunset and sunrise with a good and sufficient headlight which shall consume not less than three hundred watts at the arc, and with a reflector not less than eighteen inches in diameter and to keep the same in good condition. The word "main-line" as used herein means all portions of the railway line not used as yards, spurs and side tracks.

Section 2. That any railroad company violating this Act in any respect shall be liable to indictment as for a misdemeanor in any county in which the locomotive not so equipped and maintained may run, and on conviction shall be punished by a fine of not less than $25 nor more than $500 for each offense.

Section 3. *Provided,* This Act shall not apply to tramroads, mill roads and roads engaged principally in lumber or logging transportation in connection with mills, nor to railroad systems under thirty miles long not running regular night schedules. Nor to any engine the lighting equipment of which shall have failed during the trip if it is shown that the equipment was in efficient and effective working condition when the trip was begun, nor to switch engines going to and returning from wrecks

or sent out on main line to bring into a terminal a train, the engine of which has become disabled.

Section 4. *Be it further enacted,* That all laws and parts of laws in conflict with this Act be and the same are hereby repealed.

Section 5. That this Act shall go into effect January 1st, 1913.

Approved February 29, 1912.

MONTANA.

Chapter 18.

Section 1. It shall be the duty of any person, corporation or company operating any railroad or railway in this State, within one year after the passage of this Act, to equip all locomotive engines used in the transportation of trains over said railroad or railway with electric headlights of not less than 1,500 candle power, measured without the aid of a reflector, or other headlights of not less than 1,500 candle power, measured without the aid of a reflector; *Provided,* That this Act shall not apply to locomotive engines regularly used in the switching of trains.

Section 2. Any person, corporation or company operating any railroad or railway in this State violating the provisions of Section 1 of this Act, shall be deemed guilty of a misdemeanor, and, upon conviction thereof, shall be fined not less than $100 nor more than $1,000 for each offense.

Approved February 16, 1909.

NORTH CAROLINA.

Chapter 446.

Section 1. Every company, corporation, lessee, manager or receiver owning or operating a railroad in this State is hereby required to equip and maintain and use upon each and every locomotive in operation in railroad service on main lines in this State an electric or power headlight of at least 1,500 candle power, measured without the aid of a reflector; *Provided,* That only twenty-five per cent of said locomotives not now so equipped shall be required to be so equipped or used by April 1st, 1910; another twenty-five per cent by April 1st, 1911; another twenty-five per cent by April 1, 1912, and the remainder by April 1st, 1913: *Provided,* That this Act shall not apply to locomotive engines regularly used in switching cars or trains: *And, Further Providing,* That this Act shall not apply to locomotive engines used exclusively between sunup and sundown, nor going to nor returning from repair shops when ordered in for repairs: *Provided Further,* That this Act shall not apply to independently owned and operated railroad companies in this State, whose mileage of road in this State is 125 miles or less, nor to railroads having only lines extending into this State, no one of which is 100 miles in length in this State: *Provided Further,* The Corporation Commission may relieve from the operation of this Act such locomotives and roads or parts of sections or branches of roads upon which the said Corporation Commission may deem

electric or power headlights not advisable: *Provided Further,* That should an engine start on a trip with the headlight in good working condition, and from some unavoidable cause such headlight becomes disabled and can not be repaired on the line of the road on which such run is being made, there shall be nothing in this Act to prevent said engine from continuing on said trip, and the railroad shall not be liable for prosecutions on account of such failure.

Section 2. That any company, corporation, lessee, manager, or receiver violating the provisions of this Act shall be guilty of a misdemeanor.

Ratified the 5th of March, 1909.

OHIO—Acts of 1910, Page 330.

Section 1. Every railroad corporation operating a railroad or a part of one in this State, shall, on or before the first day of January, 1911, equip each of its locomotives (except locomotives used exclusively in yard service), with a headlight of such construction, and with sufficient candle power to render plainly visible at a distance of not less than 350 feet in advance of such engine, whistling posts, land marks, and other warning signs, and it shall be unlawful, after such date, for any such railroad to use a locomotive (except locomotives used exclusively in yard service) upon any part of its road lying within this State, that is not equipped with a headlight of such construction and candle power as will enable the engineer to see whistling posts, land marks and other

warning signs at a distance of not less than 350 feet in advance of the engine: *Provided,* That not less than thirty per cent of all the locomotives hereinbefore required to be provided with such headlights shall be so equipped on or before September 1, 1910.

Section 2. The state railroad commission shall from time to time inspect or cause to be inspected the headlights of all locomotives found in use on any railroad in this State. On discovering any defective headlight the commission shall report the fact to the superintendent or other officer having charge of the road on which it is found, and the railroad corporation receiving such notice, shall thereupon cause such defective headlight to be immediately repaired, and if so ordered by the railroad commission shall put the locomotive containing such defective headlight out of service until repaired and put in good working order.

Section 3. Any railroad corporation using or permitting to be used on its line in this State a locomotive, in violation of any provision of this Act shall be liable to a penalty of $100 for each violation, to be recovered in a suit or suits to be brought by the prosecuting attorney in the common pleas court of the county having jurisdiction in the locality where such violation occurred. Upon duly verified information being given him of such violation such prosecuting attorney shall bring such suits. The railroad commission shall give the proper prosecuting attorney information of any such violation as may come to its knowledge.

Approved May 20, 1910.

OKLAHOMA—Acts of 1907-8. Page 645.

Section 1. Every company, corporation, lessee, manager or receiver, owning or operating a railroad in this State, is hereby required to equip and maintain and use upon each and every locomotive being operated in road service in this State, an electric or other headlight of at least 1,500 candle power, measured without the aid of a reflector. *Provided,* That this Act shall not apply to locomotive engines regularly used in switching cars or trains: *And Provided Further,* That this Act shall not apply to locomotive engines used exclusively between sunup and sundown, nor going to nor returning from repair shops when ordered in for repairs.

Section 2. Any railroad company, or the receiver, or lessee thereof, doing business in the State of Oklahoma, which shall violate the provisions of this Act, shall be liable to the State of Oklahoma for the penalty of not less than $100 dollars nor more than $1,000 dollars for each offense. And such penalties shall be recovered and suit brought, in the name of the State of Oklahoma, in any court of competent jurisdiction, in any county in or through which such line of railroad may run, by the attorney general, or by the county attorney in any county, in or through which such line of railroad may be operated.

Approved March 12, 1908.

SOUTH CAROLINA—Act of 1912.

Section 1. Every company, lessee, manager or receiver, owning or operating a railroad in this State, is

hereby required to equip and maintain and use upon every and each locomotive being operated in railroad service in this State, headlights of at least 10,000 candle power, measured with the aid of a reflector, or with a headlight that will enable a man of normal vision to see a man at 800 feet from the locomotive, under normal conditions: *Provided,* That this Act shall not apply to locomotive engines regularly used in switching cars or trains; and, *Provided, Further,* That this Act shall not apply to locomotive engines used exclusively between sunup and sundown, nor going to or returning from repair shops when ordered in for repairs; and, *Provided, Further,* That it shall not apply to a case where the headlight of an engine has failed after starting on a trip and can not be repaired on the line, nor another engine furnished, but such engine may continue on its trip or to such point as it is practicable to furnish a new engine or to repair the said light.

Section 2. Be it Further Enacted by the authority aforesaid that each said person, partnership, companies or receivers who are affected by this law, shall, within one year, equip one-fourth of their respective engines in accordance with this Act, and shall each year thereafter equip one-fourth of said locomotives until the entire number is so equipped: *Provided,* That all locomotives hereafter equipped by the persons or corporations, receivers or partnerships affected hereby, shall be equipped in accordance herewith.

Section 3. Any railroad company, or the receiver or lessee thereof, doing business in the State of South Caro-

lina, which shall violate the provisions of this Act, shall be liable to the State of South Carolina for a penalty of not less than $100 nor more than $1,000 for each offense, and such penalty be recovered and suit brought in the name of the State of South Carolina in any court of competent jurisdiction, in any county in, or through which line of railroad may run, by the Attorney General or any Circuit Solicitor.

Section 4. All Acts and parts of Acts in conflict herewith are hereby repealed.

Section 5. This Act shall not apply to railways or railroads less than sixty miles in length in this State.

Became Law without Governor's approval February 20, 1912.

SOUTH DAKOTA—Acts of 1911.

Chapter 213.

Section 1. It shall be the duty of every railroad corporation or receiver or lessee thereof operating any line of railroad in the State of South Dakota, to equip all locomotives being operated in road service in the State of South Dakota in the night time, with a headlight of not less than 1,500 candle power measured without the aid of a reflector, the same to be kept in good condition: *Provided,* That ten per cent of the said locomotives shall be required to be equipped within sixty days after the passage and approval of this Act and an additional ten per cent to be so equipped every thirty days thereafter until all engines operated in the State of South Dakota

in the night time in road service shall be equipped according to the provisions of this Act.

Section 2. Any railroad corporation or receiver or lessee thereof operating any line of railroad in the State of South Dakota which shall violate any of the provisions of this Act shall be liable to the State of South Dakota for a penalty of not less than $100 or more than $1,000 for each offense.

Approved March 1, 1911.

TEXAS—Acts of 1907.

Chapter 32.

Section 1. It shall be the duty of every railroad corporation or receiver or lessee thereof, operating any line of railroad in this State, within six months after the passage of this Act, or within such additional time as may be prescribed by order of the railroad commission of Texas, after a proper showing of their inability to comply by the railroad has been made, to equip all locomotive engines used in the transportation of trains over said railroad with electric headlights of not less than 1,500 candle power, measured without the aid of a reflector, or other headlights of not less than 1,500 candle power, measured without the aid of a reflector: *Provided*, That this Act shall not apply to locomotive engines regularly used in the switching of cars or trains.

Section 2. Any railroad company or the receiver or lessee thereof, doing business in the State of Texas, which shall violate the provisions of this Act, shall be

liable to the State of Texas for a penalty of not less than $100 nor more than $1,000 for each offense.

WASHINGTON—Acts of 1911.

Chapter 117.

Section 66. Each locomotive on every railroad in this State shall be equipped....., excepting such as may be assigned to daylight runs or switching service exclusively, with electric headlights of approved design and capacity (except that locomotives may be operated without such headlight upon permission and order of the commission).....

Approved March 18, 1911.

WISCONSIN.

Chapter 29.

Section 1. There is added to the Statutes a new section to read:

Section 1809v. 1. It shall be the duty of every corporation operating any steam railroad of more than fifty miles of track within this State, to equip on or before July 1, 1912, every locomotive, power vehicle, power car, and other equipment used as the equivalent of or in place of locomotives, except such as are used exclusively for switching service or in railroad yards and not elsewhere, with a headlight of sufficient candle power, measured with a reflector, to throw a light in clear weather that will enable the operator of the same to plainly discern an object the size of a man, at a distance of not less than

800 feet, and thereafter to maintain and use such headlights upon every such locomotive, vehicle car or other equipment, when the same is operated at nighttime.

2. Any corporation violating any of the provisions of this section shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than $100 nor more than $500 for each offense, and in addition shall be liable for all damages resulting in whole or in part, directly or indirectly, from such violation.

Approved April 28, 1911.

ORDER.

AT A GENERAL SESSION OF THE INTERSTATE COMMERCE COMMISSION, HELD AT ITS OFFICE IN WASHINGTON, D. C., ON THE 13TH DAY OF MARCH, A. D. 1911.

Present:

JUDSON C. CLEMENTS,
CHARLES A. PROUTY,
FRANKLIN K. LANE,
EDGAR E. CLARK,
JAMES S. HARLAN,
CHARLES C. MCCHORD,
BALTHASAR H. MEYER,
} Commissioners.

IN THE MATTER OF DESIGNATING THE NUMBER, DIMENSIONS, LOCATION, AND MANNER OF APPLICATION OF CERTAIN SAFETY APPLIANCES.

Whereas by the third section of an act of Congress approved April 14, 1910, entitled "An Act to supple-

ment 'An Act to promote the safety of employees and travelers upon railroads by compelling common carriers engaged in interstate commerce to equip their cars with automatic couplers and continuous brakes and their locomotives with driving-wheel brakes, and for other purposes,' and other safety appliance acts, and for other purposes," it is provided, among other things, "That within six months from the passage of this act the Interstate Commerce Commission, after hearing, shall designate the number, dimensions, location, and manner of application of the appliances provided for by section two of this act and section four of the act of March second, eighteen hundred and ninety-three, and shall give notice of such designation to all common carriers subject to the provisions of this act by such means as the Commission may deem proper, and thereafter said number, location, dimensions, and manner of application as designated by said Commission shall remain as the standards of equipment to be used on all cars subject to the provisions of this act, unless changed by an order of said Interstate Commerce Commission, to be made after full hearing and for good cause shown; and failure to comply with any such requirement of the Interstate Commerce Commission shall be subject to a like penalty as failure to comply with any requirement of this act: *Provided,* That the Interstate Commerce Commission may, upon full hearing and for good cause, extend the period within which any common carrier shall comply with the provisions of this section with respect to the equipment of

cars actually in service upon the date of the passage of this act;" and

Whereas hearings in the matter of the number, dimensions, location, and manner of application of the appliances, as provided in said section of said act, were held before the Interstate Commerce Commission at its office in Washington, D. C., on September 29th and 30th, and October 7, 1910, respectively; and February 27, 1911.

Now, therefore, in pursuance of and in accordance with the provisions of said section three of said act, and superseding the Commission's order of October 13, 1910, relative thereto

It is ordered, That the number, dimensions, location, and manner of application of the appliances provided for by section two of the act of April 14, 1910, and section four of the act of March 2, 1893, shall be as follows:

(Omitting Rules and Regulations concerning the different classes of freight cars, passengers cars, tank cars, and caboose cars.)

STEAM LOCOMOTIVES USED IN ROAD SERVICE.

Tender Sill-Steps.

Number.—Four (4) on tender.

Dimensions.—Bottom tread not less than eight (8) by twelve (12) inches, metal. [*May have wooden treads.*] If stirrup-steps are used, clear length of tread shall be not less than ten (10), preferably twelve (12), inches.

Location.—One (1) near each corner of tender on sides.

MANNER OF APPLICATION.—Tender sill-steps shall be securely fastened with bolts or rivets.

PILOT SILL-STEPS.

NUMBER.—TWO (2).

DIMENSIONS.—Tread not less than eight (8) inches in width by ten (10) inches in length, metal. [*May have wooden treads.*]

LOCATION.—One (1) on or near each end of buffer-beam outside of rail and not more than sixteen (16) inches above rail.

MANNER OF APPLICATION.—Pilot sill-steps shall be securely fastened with bolts or rivets.

PILOT-BEAM HANDHOLDS.

NUMBER.—TWO (2).

DIMENSIONS.—Minimum diameter, five-eighths (⅝) of an inch, wrought iron or steel. Minimum clear length, fourteen (14), preferably sixteen (16), inches. Minimum clearance, two and one-half (2½) inches.

LOCATION.—One (1) on each end of buffer-beam. [*If uncoupling-lever extends across front end of locomotive to within eight (8) inches of end of buffer-beam, and is seven-eighths (⅞) of an inch or more in diameter, securely fastened, with a clearance of two and one-half (2½) inches, it is a handhold.*]

MANNER OF APPLICATION.—Pilot-beam handholds shall be securely fastened with bolts or rivets.

Side-Handholds.

Number.—Six (6).

Dimensions.—Minimum diameter, if horizontal, five-eighths (⅝) of an inch; if vertical, seven-eighths (⅞) of an inch, wrought iron or steel. Horizontal, minimum clear length, sixteen (16) inches. Vertical, clear length equal to approximate height of tank. Minimum clearance two (2), preferably two and one-half (2½), inches.

Location.—Horizontal or vertical: If vertical, one (1) on each side of tender within six (6) inches of rear or on corner, if horizontal, same as specified for "Box and other house cars." One (1) on each side of tender near gangway; one (1) on each side of locomotive at gangway; applied vertically.

Manner of Application.—Side-handholds shall be securely fastened with not less than one-half (½) inch bolts or rivets.

Rear-End Handholds.

Number.—Two (2).

Dimensions.—Minimum diameter, five-eights (⅝) of an inch, wrought iron or steel. Minimum clear length, fourteen (14) inches. Minimum clearance two (2), preferably two and one-half (2½), inches.

Location.—Horizontal: One (1) near each side of rear end of tender on face of end-sill. Clearance of outer end of handhold shall be not more than sixteen (16) inches from side of tender.

Manner of Application.—Rear-end handholds shall

be securely fastened with not less than one-half (½) inch bolts or rivets.

Uncoupling Levers.

Number.—Two (2) double levers, operative from either side.

Dimensions.—Rear-end levers shall extend across end of tender with handles not more than twelve (12), preferably nine (9), inches from side of tender with a guard bent on handle to give not less than two (2) inches clearance around handle.

Location.—One (1) on rear end of tender and one (1) on front end of locomotive. Handles of front-end levers shall be not more than twelve (12), preferably nine (9), inches from ends of buffer-beam, and shall be so constructed as to give a minimum clearance of two (2) inches around handle.

Manner of Application.—Uncoupling levers shall be securely fastened with bolts or rivets.

Couplers.

Locomotives shall be equipped with automatic couplers at rear of tender and front of locomotive.

STEAM LOCOMOTIVES USED IN SWITCHING SERVICE.

Footboards.

Number.—Two (2) or more.

Dimensions.—Minimum width of tread, ten (10) inches, wood. Minimum thickness of tread, one and one-

half (1½), preferably two (2), inches. Minimum height of back-stop, four (4) inches above tread. Height from top of rail to top of tread, not more than twelve (12) nor less than nine (9) inches.

LOCATION.—Ends or sides. If on ends, they shall extend not less than eighteen (18) inches outside of gauge of straight track, and shall be not more than twelve (12) inches shorter than buffer-beam at each end.

MANNER OF APPLICATION.—End footboards may be constructed in two (2) sections, *provided* that practically all space on each side of coupler is filled; each section shall be not less than three (3) feet in length. Footboards shall be securely bolted to two (2) one (1) by four (4) inches metal brackets, *provided* footboard is not cut or notched at any point. If footboard is cut or notched or in two (2) sections, not less than four (4) one (1) by three (3) inches metal brackets shall be used, two (2) located on each side of coupler. Each bracket shall be securely bolted to buffer-beam, end-sill or tank-frame by not less than two (2) seven-eighths (⅞) inch bolts. If side footboards are used, a substantial hand-hold or rail shall be applied not less than thirty (30) inches nor more than sixty (60) inches above tread of footboard.

SILL-STEPS.

NUMBER.—Two (2) or more.

DIMENSIONS.—Lower tread of step shall be not less than eight (8) by twelve (12) inches, metal. [*May have wooden treads.*] If stirrup-steps are used, clear length

of tread shall be not less than ten (10), preferably twelve (12), inches.

LOCATION.—One (1) or more on each side at gangway secured to locomotive or tender.

MANNER OF APPLICATION.—Sill-steps shall be securely fastened with bolts or rivets.

END-HANDHOLDS.

NUMBER.—Two (2).

DIMENSIONS.—Minimum diameter, one (1) inch, wrought iron or steel. Minimum clearance, four (4) inches, except at coupler casting or braces, when minimum clearance shall be two (2) inches.

LOCATION.—One (1) on pilot buffer-beam; one on rear end of tender, extending across front end of locomotive and rear end of tender. Ends of handholds shall be not more than six (6) inches from ends of buffer-beam or end-sill, securely fastened at ends.

MANNER OF APPLICATION.—End-handholds shall be securely fastened with bolts or rivets.

SIDE-HANDHOLDS.

NUMBER.—Four (4).

DIMENSIONS.—Minimum diameter, seven-eighths (⅞) of an inch, wrought iron or steel. Clear length equal to approximate height of tank. Minimum clearance, two (2), preferably two and one-half (2½), inches.

LOCATION.—Vertical. One (1) on each side of tender near front corner; one (1) on each side of locomotive at gangway.

MANNER OF APPLICATION.—Side-handholds shall be securely fastened with bolts or rivets.

UNCOUPLING-LEVERS.

NUMBER.—Two (2) double levers, operative from either side.

DIMENSIONS.—Handles of front-end levers shall be not more than twelve (12), preferably nine (9), inches from ends of buffer-beam, and shall be so constructed as to give a minimum clearance of two (2) inches around handle. Rear-end levers shall extend across end of tender with handles not more than twelve (12), preferably nine (9), inches from side of tender, with a guard bent on handle to give not less than two (2) inches clearance around handle.

LOCATION.—One (1) on rear end of tender and one (1) on front end of locomotive.

HANDRAILS AND STEPS FOR HEADLIGHTS.

Switching locomotives with sloping tenders with manhole or headlight located on sloping portion of tender shall be equipped with secure steps and handrail or with platform and handrail leading to such manhole or headlight.

END-LADDER CLEARANCE.

No part of locomotive or tender except draft-rigging, coupler and attachments, safety-chains, buffer-block, foot board, brake-pipe, signal-pipe, steam-heat pipe or arms of uncoupling-lever shall extend to within fourteen

(14) inches of a vertical plane passing through the inside face of knuckle when closed with horn of coupler against buffer-block or end-sill.

Couplers.

Locomotives shall be equipped with automatic couplers at rear of tender and front of locomotive.

SPECIFICATIONS COMMON TO ALL STEAM LOCOMOTIVES.

Hand-Brakes.

Hand-brakes will not be required on locomotives nor on tenders when attached to locomotives.

If tenders are detached from locomotives and used in special service, they shall be equipped with efficient hand-brakes.

Running-Boards.

Number.—Two (2).

Dimensions.—Not less than ten (10) inches wide. If of wood, not less than one and one-half (1½) inches in thickness; if of metal, not less than three-sixteenths (3/16) of an inch, properly supported.

Location.—One (1) on each side of boiler extending from cab to front end near pilot-beam. [*Running-boards may be in sections. Flat-top steam-chests may form section of running-board.*]

Manner of Application.—Running boards shall be securely fastened with bolts, rivets or studs. Locomo-

tives having Wootten type boilers with cab located on top of boiler more than twelve (12) inches forward from boiler-head shall have suitable running-boards running from cab to rear of locomotive, with handrailings not less than twenty (20) nor more than forty-eight (48) inches above outside edge of running-boards, securely fastened with bolts, rivets or studs.

Handrails.

Number.—Two (2) or more.

Dimensions.—Not less than one (1) inch in diameter, wrought iron or steel.

Location.—One on each side of boiler extending from near cab to near front end of boiler, and extending across front end of boiler, not less than twenty-four (24) nor more than sixty-six (66) inches above running-board.

Manner of Application.—Handrails shall be securely fastened to boiler.

Tenders of Vanderbilt Type.

Tenders known as the Vanderbilt type shall be equipped with running-boards; one (1) on each side of tender not less than ten (10) inches in width and one on top of tender not less than forty-eight (48) inches in width, extending from coal space to rear of tender.

There shall be a handrail on each side of top running-board, extending from coal space to rear of tank, not less than one (1) inch in diameter and not less than twenty (20) inches in height above running-board from coal space to manhole.

There shall be a handrail extending from coal space to within twelve (12) inches of rear of tank, attached to each side of tank above side running-board, not less than thirty (30) nor more than sixty-six (66) inches above running board.

There shall be one (1) vertical end handhold on each side of Vanderbilt type of tender, located within eight (8) inches of rear of tank extending from within eight (8) inches of top of end-sill to within eight (8) inches of side handrail. Post supporting rear end of side running-board if not more than two (2) inches in diameter and properly located, may form section of handhold.

An additional horizontal end handhold shall be applied on rear end of all Vanderbilt type of tenders which are not equipped with vestibules. Handhold to be located not less than thirty (30) nor more than sixty-six (66) inches above top of end-sill. Clear length of handhold to be not less than forty-eight (48) inches.

Ladders shall be applied at forward ends of side running-boards.

Handrails and Steps for Headlights.

Locomotives having headlights which can not be safely and conveniently reached from pilot-beam or steam-chests shall be equipped with secure handrails and steps suitable for the use of men in getting to and from such headlights.

A suitable metal end or side-ladder shall be applied to all tanks more than forty-eight (48) inches in height,

measured from the top of end-sill, and securely fastened with bolts or rivets.

COUPLERS.

Locomotives shall be equipped with automatic couplers at rear of tender and front of locomotive.

Cars of construction not covered specifically in the foregoing sections, relative to handholds, sill-steps, ladders, hand-brakes and running-boards may be considered as of special construction, but shall have, as nearly as possible, the same complement of handholds, sill-steps, ladders, hand-brakes and running-boards as are required for cars of the nearest approximate type.

"RIGHT" or "LEFT" refers to side of person when facing end or side of car from ground.

To provide for the usual inaccuracies of manufacturing and for wear, where sizes of metal are specified, a total variation of five (5) per cent below size given is permitted.

And it is further ordered, That a copy of this order be at once served on all common carriers, subject to the provisions of said act, in a sealed envelope by registered mail.

By the Commission:

EDWARD A. MOSELEY, *Secretary.*

Office Supreme Court, U. S.
FILED.
MAR 17 1913
JAMES H. McKENNEY,
CLERK.

Supreme Court of the United States

OCTOBER TERM, 1912

No. ~~222~~ 24

Atlantic Coast Line Railway Company

Plaintiff in Error

VS.

The State of Georgia

In Error to the Court of Appeals of the State of Georgia

BRIEF FOR THE STATE OF GEORGIA

THOMAS S. FELDER,
Attorney General of Georgia.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1912.

No. 222.

ATLANTIC COAST LINE RAILROAD COMPANY,

Plaintiff in Error,

vs.

THE STATE OF GEORGIA.

In Error to the Court of Appeals of the State of Georgia.

BRIEF FOR THE STATE OF GEORGIA.

ARGUMENT AND CITATION OF AUTHORITIES.

The Act of the General Assembly of Georgia, the validity of which is being contested by the plaintiff in error, is found in the published laws of said State for 1908, pp. 50, 51, and in the Civil Code (1910) sections 2697 and 2698; it is in full as follows:

> "An Act to require all railway companies in the State to equip and maintain each and every locomotive used with sufficient electric headlight, to prescribe a punishment for the failure to so equip and for other purposes.
>
> "Section 1. Be it enacted by the General Assembly of Georgia, and it is hereby enacted by authority of the same, That all railroad companies are hereby required to equip and maintain

each and every locomotive used by such company to run on its main line after dark with a good and sufficient headlight which shall consume not less than three hundred watts at the arc, and with a reflector not less than twenty-three inches in diameter, and to keep the same in good condition. The word main line as used herein means all portions of the railway line not used solely as yards, spurs and sidetracks.

"Sec. 2. Be it further enacted, That any railroad company violating this Act in any respect shall be liable to indictment as for a misdemeanor in any county in which the locomotive not so equipped and maintained may run, and on conviction shall be punished by fine as prescribed in Section 1039, of the Code of 1895.

"Sec. 3. Be it further enacted, That this Act shall go into effect July 1st, 1909.

"Sec. 4. Provided this Act shall not apply to tram-roads, mill-roads and roads engaged principally in lumber or logging transportation in connection with mills.

"Sec. 5. Be it further enacted, That all laws and parts of laws in conflict with this Act be and the same are hereby repealed."

The Federal questions made in the defense set up by the plaintiff in error in the courts below to the accusation against it for a violation of the above Act were that the Act contravened the Fourteenth amendment to the Federal Constitution in that it deprived the railroad company of its property without due process of law, by causing it to abandon the head-lights which it then used and to purchase new head-lights; that it contravened the Fourteenth amendment further in that it denied the railroad company the equal protection of the law, for that the Act does not apply equally to all persons and corporations in the same class or similarly situated, it being

contended that the Act makes an unreasonable and arbitrary classification in that it excludes from its operation receivers of railroads, tram-roads, mill-roads and roads engaged principally in lumber of logging transportation in connection with mills; that the Act contravenes the Interstate Commerce Clause of the Federal Constitution, for that to enforce the said Act would interfere with and regulate Interstate Commerce, delaying the running of locomotives having no such head-light as is required by the statute.

The Supreme Court of Georgia in the opinion rendered in this case deal fully with each of the Federal questions made and ably discuss the reasons given by it for deciding against the contentions made by the plaintiff in error and we respectfully commend this decision to the attention of the court. The opinion is found on pp. 105 to 119 of the record, and in 135 Ga. 545.

From a reading of the Act it will be noticed that it requires railroad companies to equip those locomotives used by it upon its main line at night with sufficient headlight which shall consume not less than a given number of watts at the arc and with reflector of a certain size. It does not prohibit the use of any electric light of greater power than that prescribed by the Act nor does it prohibit the use of a reflector of a larger size, but by its terms it does say that a light carrying a reflector less than that prescribed by the Act and consuming a less number of watts would be an insufficient light. The legislative body clearly had the right to determine what was an efficient light for a locomotive to carry in order to give protection to persons and property. The Legislature was not bound to take the judgment of the railroad company as to what constituted an adequate and efficient light, but under the police power

it has authority in the interest of the public safety to declare the light used by the railroad companies to be inefficient and to say what light would be efficient. The Legislature having under its police power required a certain kind of light to be used on locomotives running in the State, there is no taking of property in violation of the due process clause of the Constitution when the railroads in complying with the statute are required to discard the lights used by them and purchase others in compliance with the Act, nor is the Act subject to the criticism that to put it into operation will violate the interstate commerce clause of the Constitution. The evident design of the Act is to protect the lives and property of the people and is within the scope of local legislation and is a reasonable requirement. It is not a regulation of interstate commerce, but will be regarded as legislation in the aid of commerce for the people who travel on interstate trains and the employees who operate such trains are as much entitled to be protected by an adequate and efficient headlight on the locomotives as those who ride on or operate domestic trains. Congress has never, through the Interstate Commerce Commission or otherwise, acted on the subject of head-lights on locomotives. It has been firmly fixed by repeated adjudications of this court that statutes of States of the character of the one under consideration, being designed for the protection of the property and lives of the people, are not unconstitutional because they may in a manner affect interstate commerce, nor do they violate the due process clause of the Constitution because an expense may be incurred in obeying their regulations. We cite a few of these decisions.

N. Y., New Haven & Hartford R. R. Co. vs. N. Y., 165 U. S. 628.

Missouri Pacific Ry. vs. Larabee Mills, 211 U. S. 622.

Hennington vs. Georgia, 163 U. S. 299.

Smith vs. Alabama, 124 U. S. 465.

N. Y. & N. E. R. R. Co. vs. Briston, 151 U. S. 567.

Chicago, R. I. & P. R. R. vs. Arkansas, 219 U. S. 453.

Savage vs. Jones, 225 U. S. 501.

Southern Ry. Co. vs. King, 217 U. S. 524.

Chicago, B. & Q. R. Co. vs. Illinois, 200 U. S. 561.

Reid vs. Colorado, 187 U. S. 137.

Asbell vs. Kansas, 209 U. S. 251.

Chicago, M. & St. P. R. Co. vs. Solan, 169 U. S. 133.

Missouri Pacific Ry. vs. Humes, 115 U. S. 512.

N. C. & St. L. vs. Alabama, 128 U. S. 96.

The questions made in this record are decided adversely to the contentions of the plaintiff in error in the case of New York, New Hampshire & Hartford Railroad Company vs. New York, supra. In that case a statute requiring the heating of cars in a certain manner was attacked as unconstitutional and the contention was made of inconvenience in changing the heating system to comply with the laws of the different States through which the train must pass, just as the contention is made here of inconvenience in the changing of the head-light. The court in answering this contention says:

> "These possible inconveniences cannot effect the question of power in each State to make such reasonable regulations for the safety of passengers on interstate trains as in its judgment, all things considered, is appropriate and effective. Inconveniences of this character cannot be avoided so long as each State has plenary authority within its territorial limits to provide for the safety of

> the public, according to its own views of necessity and public policy, and so long as Congress deems it wise not to establish regulations on the subject that would displace any inconsistent regulations of the States covering the same grounds." (See pages 632, 633.)

It was also insisted in that case that the law was unconstitutional because it did not apply to roads of less than fifty miles in length, just as it is contended in the case at bar that the law is unconstitutional because it does not apply to tram-roads, mill-roads and roads engaged principally in lumber or logging transportation in connection with mills. The court in this regard said:

> "No doubt the main object of the statute was to provide for the safety of passengers travelling on what are commonly called trunk or through lines, connecting distant or populous parts of the country, and on which the perils incident to travelling are greater than on short, local lines. But as suggested in argument, the road only fifty miles in length which seldom has a sleeping car attached to its trains; and passengers travelling on roads of that kind do not have the apprehension ordinarily felt by passengers on trains regularly carrying sleeping cars or having many passenger coaches, on account of the burring of cars in case of their derailment or in case of collision. In any event there is no such discrimination against companies having more than fifty miles of road as to justify the contention that there has been a denial to the company named in the Act of the equal protection of the law. The statute is uniform in its operation upon all railroad companies doing business in the State of the class to which it is made applicable." (See pages 633, 634.)

The Act does not violate the equal protection clause of the Constitution because it excepts from its operations

tram-roads, mill-roads and roads engaged principally in lumber or logging transportation in connection with mills. This would seem to be a wise and reasonable classification. The class of roads excepted do not serve the public generally in the carrying of passengers, but are more in the nature of private enterprises.

> "A State regulation that is uniform on all of the class to which it is applicable is not unconstitutional as denying equal protection of the law because it does not apply to railroads less than fifty miles in length. The classification is a reasonable one."
>
> Chicago, R. I. & Pac. R. Co. vs. Kansas, 219 U. S. 453.
>
> New York, N. H. & H. R. Co. vs. New York, supra.
>
> People vs. New York, etc., 56 Hun. 409.
>
> Missouri, etc. R. Co. vs. State, 121 S. W. 930 (Ark.)
>
> Chicago, etc. R. Co. vs. Railroad Com'rs, 90 N. E. 1011.

The contention that the Act exempts from its operations railroads operated by receivers is not tenable. The Act does not by its terms exempt receivers of railroads. Nothing is said in the Act about receivers of railroads. If it can be urged that receivers are not liable to the penalty of the statute because they are an arm of the court then all statutes placing penalties upon railroad companies would be void for the same reason. It will be presumed that a court would order its officer to comply with the terms of the statute and equip the locomotives with the head-lights required. We beg to refer the court to the opinion of the Supreme Court of Georgia on this contention. R. 112.

Nor is the statute subject to the criticism made that it interferes with the right of the railroad company to contract. This court in the case of New York & New England R. Co. vs. Town of Bristol, 151 U. S. 556, 567, say:

> "It is likewise thoroughly established in this court that the inhibitions of the Constitution of the United States upon the impairment of the obligation of contracts, or the deprivation of property without due process or of the equal protection of the laws, by the States, are not violated by the legitimate exercise of legislative power in securing the public safety, health and morals. The governmental power of self protection cannot be contracted away, nor can the exercise of rights granted, nor the use of property, be withdrawn from the implied liability to governmental regulation in particulars essential to the preservation of the community from injury."

In McGehee on Due Process of Law, 345, it is said:

> "Although freedom and the liberty to contract are fundamental rights within the guaranties of the Constitution, they may be limited by the State in the exercise of the police power in the interest of the public safety, health, or morals, or, under certain conditions, in the exercise of the legislative power merely."

It is not a taking of property without due process of law, in contemplation of this provision of the Constitution, because the railroad, in order to comply with the statute, would have to discard the head-lights used by it, which it considers a good head-light, and replace the same with the head-lights required under the Act. All property is held subject to the police regulations of the State.

Chicago, B. & Q. R. Co. vs. Illinois, 200 U. S. 561.
New York, N. H. & H. R. Co. vs. New York, 165 U. S. 628.
Bacon vs. B. & M. R. Co. 76 Atl. 128 (19) (Vt.)
Munn vs. Illinois, 94 U. S. 113.
Missouri Pac. R. Co. vs. Humes, 115 U. S. 512.

The contention is made that the Legislature should not have prescribed in detail the kind of light which should be used, that the designating of the size of the reflector and the number of watts that should be used was improper. The intensity of an electric light is measured by the watt, and the reflector increases the breadth and intensity of the light. This was all known to the Legislature and it doubtless investigated and satisfied itself of the wisdom of thus designating the kind and character of light to be used so as to make the law plain. Simply to have enacted that a sufficient light or an adequate light should be used would have left the law in doubt and practically unenforceable, or if enforced at all, probably in an inconsistent way, and very likely an injustice done to the railroads as they would have been in ignorance of what they were really expected to do to comply with the law.

> "Courts always presume that a Legislature in enacting statutes acts advisedly and with full knowledge of the situation, * * * and they must accept its action as that of a body having full power to act, and only acting when it has acquired sufficient information to justify its action."
>
> Chesapeake etc. vs. Manning, 186 U. S. 238.

In Freund on Police Power Sec. 34, it is said:

> "Assuming that several measures are equally efficient to avert danger to health or safety, it would still seem to be within the legislative power

> to select one method and require its adoption; for it is easier to enforce uniform police regulations than a great variety of measures, the efficiency of each of which would be a question of fact in each particular case."

In Atchison, etc. Railroad Company vs. Matthews, 174 U. S. 96, 102, this court said:

> "If, in order to accomplish a given beneficial result—a result which depends on the action of a corporation—the Legislature has the power to prescribe a specific duty and punish a failure to comply therewith by a penalty, either double damages or attorney's fees, has it not equal power to prescribe the same penalty for failing to accomplish the same result, leaving to the corporation the selection of the means it deems best therefor? Does the power of the Legislature depend upon the method it pursues to accomplish the result? As individuals we may think it better that the Legislature prescribes the specific duties which the corporation must perform; we may think it better that the legislation should be like that of Missouri, prescribing an absolute liability, instead of that of Kansas, making the fact of fire *prima facie* evidence of negligence; but clearly as a court we may not interpose our personal views as to the wisdom or policy of either form of legislation. It cannot be too often said that forms are matters of legislative consideration; results and power only are to be considered by the courts."

This statute is in the interest of the public and its wisdom cannot be questioned by the courts. The law making body has determined the matter in this regard. The public policy of the government is to be found in its statutes and when the law making power speaks upon a particular subject over which it has constitutional power

to legislate, public policy in such cases is what the statute enacts.

> Logan & Bryan vs. Postal Tel. Co., 157 Fed. R. 570, 587.
>
> U. S. vs. Freight Association, 166 U. S. 340.
>
> "The scope of judicial inquiry in deciding the question of power is not to be confused with the scope of legislative considerations in dealing with the matter of policy. Whether the enactment is wise or unwise, whether it is based on sound economic theory, whether it is the best means to achieve the desired result, whether, in short, the legislative discretion within its prescribed limits should be exercised in a particular manner, are matters for the judgment of the Legislature, and the earnest conflict of serious opinion does not suffice to bring them in the range of judicial cognizance.
>
> "The principle was thus stated in McLean vs. Arkansas, 211 U. S. 547, 548: 'The Legislature, being familiar with local conditions, is, primarily, the judge of the necessity of such enactments. The mere fact that a court may differ with the Legislature in its views of public policy, or that judges may hold views inconsistent with the propriety of the legislation in question, affords no ground for judicial interference, unless the Act in question is unmistakably and palpably in excess of legislative power.' "
>
> Chicago B. & Q. R. R. Co. vs. McGuire, 219 U. S. 549, 569.

It is urged in the brief filed for the plaintiff in error, though no such contention was made in the courts below nor set out in the assignments of error, that the Act is unenforceable and void under the commerce clause of the Federal Constitution because Congress has pre-

empted and occupied the field of regulation on the same subject matter. Several statutes of Congress are cited in support of this contention, but it will be clearly seen from an inspection of these statutes that none of them legislate as to head-lights on locomotives, nor has the Interstate Commerce Commission issued any rule or regulation in regard to the same. We deny the contention made and respectfully submit that the subject has not been acted upon in any way by Congress or by the Interstate Commerce Commission, directly or indirectly. This Act of the Legislature of Georgia does not in any way conflict with any Act of Congress or any rule or regulation of the Interstate Commerce Commission, and in the absence of such conflict the Federal courts will not declare the Act invalid as interfering with interstate commerce. As long as the field has not been completely covered by Congress the States have the right, under their reserved police power, to legislate upon the subject.

> "But the intent to supercede the exercise by the State of its police power as to matters not covered by the Federal legislation is not to be inferred from the mere fact that Congress has seen fit to circumscribe its regulation and to occupy a limited field. In other words, such intent is not to be implied unless the Act of Congress fairly interpreted is in actual conflict with the law of the State. This principle has had abundant illustration" (citing cases).

Savage vs. Jones, 225 U. S. 501, 533.

In the case of Missouri Pacific Ry. vs. Larabee Mills, 211 U. S. 612, 623, this court said:

> "On the other hand, it is said that Congress has already acted, has created the Interstate Commerce Commission, and given to it a large measure of control over interstate commerce. But the fact

that Congress has intrusted power to that commission does not, in the absence of action by it, change the rule which existed prior to the creation of the commission. Congress could always regulate interstate commerce, and could make specific provisions in reference thereto, and yet this has not been held to interfere with the power of the State in these incidental matters. A mere delegation by Congress to the commission of a like power has no greater effect, and does not of itself disturb the authority of the State. It is not contended that the commission has taken any action in respect to the particular matters involved. It may never do so, and no one can in advance anticipate what it will do when it acts. Until then the authority of the State in merely incidental matters remains undisturbed. In other words, the mere grant by Congress to the commission of certain national powers in respect to interstate commerce does not of itself and in the absence of action by the commission interfere with the authority of the State to make those regulations conducive to the welfare and convenience of its citizens. Running through the entire argument of counsel for the Missouri Pacific is the thought that the control of Congress over interstate commerce and a delegation of that control to a commission necessarily withdraws from the State all power in respect to regulations of a local character. This proposition cannot be sustained. Until specific action by Congress or the commission the control of the State over these incidental matters remains undisturbed."

And in the case of Reid vs. Colorado, 187 U. S. 137, 148, it is said:

> "It should never be held that Congress intends to supersede or by its legislation suspend the exercise of the police powers of the States, even

> when it may do so, unless its purpose to effect that result is clearly manifested. This court has said —and the principle has been often reaffirmed— that 'in the application of this principle of supremacy of an Act of Congress in a case where the State law is but the exercise of a reserved power, the repugnance or conflict should be direct and positive, so that the two acts could not be reconciled or consistently stand together.' "

A reading of the brief of evidence will make it plain to the court that the requirement of the Act is a reasonable one, not arbitrary, and the criticisms made of it are absolutely without merit. The wisdom of the Legislature in enacting this statute is well sustained by this evidence. (Testimony of F. F. Starr, W. K. Kline, J. T. Fickling, E. A. Linan, R. S. Palmer and T. C. Waters, record pp. 66-90.) The evidence shows that the electric head-light has been used in the State of Georgia for a great number of years on both interstate and domestic trains, causing not the least inconvenience to the railroad companies. The position taken by the plaintiff in error that it would have to establish a plant at the State lines in order to change the lights if they use the head-light required by the Act is clearly imaginary. There is no State which prohibits the use of electric head-lights nor is there any State which demands the use of oil lights. The statutes which have been enacted by the different States upon the subject of electric head-lights fix a minimum volume of light and a minimum reflector, when the reflector is referred to at all, and none of the States attempt to regulate the maximum light or reflector to be used. It would clearly not be a violation of such statutes to carry a greater light or a greater reflector than that required by the statute, but, however this may be, it is shown by the evidence that casings can be and are made

to accommodate different sizes of reflectors. The evidence further shows that the cost of operating these electric lights are practically infinitesimal, and less than the operation of the oil light. The contention of the plaintiff in error as to the expense of operating the electric head-light is absolutely broken down by the evidence. R. pp. 66-90. The evidence also shows that the electric head-light does not change the signal signs, does not affect the eye-sight, except to preserve it, and that it is in every particular better than any other light for use on locomotives. Practically all of the railroads in the State of Georgia are using electric head-lights on their locomotives and many of them have been using them for a long number of years with most satisfactory results. None of them have ever discarded the electric head-light when once installed.

We earnestly insist that the Act is not invalid for any of the reasons asserted; that it is a just and reasonable law, enacted for the safety of the passengers and operatives of trains, as well as for the protection of the property of the railroad company itself; that it is clearly within the police power of the State, and should be upheld by this honorable court.

Respectfully submitted,

THOMAS S. FELDER,

Attorney-General of Georgia.

ATLANTIC COAST LINE RAILROAD COMPANY *v.* STATE OF GEORGIA.

ERROR TO THE COURT OF APPEALS OF THE STATE OF GEORGIA.

No. 24. Argued April 17, 1913.—Decided June 8, 1914.

The existence of difference of opinion as to which is the best form of necessary safety device does not preclude the exercise of legislative discretion; and so far as the question is simply one of expediency the legislature is competent to decide it.

The criticism that a police statute requires a carrier to comply with conditions beyond its control and, therefore, deprives it of its property without due process of law, is not open in this court if the state court has construed the statute as not so requiring the carrier.

The state court having held that the term "railroad company" as used

in a state police statute is inclusive of natural persons operating a railroad and that the statute is not unconstitutional as denying equal protection of the law to railroad corporations because it does not include natural persons, this court concurs in that view.

A state police statute requiring railroad companies to use a specified safety device is not unconstitutional as denying equal protection of the laws because it does not affect receivers operating railroads; in view of the temporary and special character of a receiver's management, the classification is reasonable and proper.

In the absence of legislation by Congress, the States may exercise their powers to secure safety in the physical operation of railroad trains within their territory, even though such trains are used in interstate commerce.

In regulating interstate trains as to matters in regard to which Congress has not acted, a State may not make arbitrary requirements as to safety devices; but its requirements are not invalid as interfering with interstate commerce because another State, in the exercise of the same power, has imposed, or may impose, a different requirement.

Congress may, whenever it pleases, make the rule and establish the standard to be observed on interstate highways.

None of the safety appliance statutes enacted by Congress relate to or regulate locomotive headlights.

The intent of Congress to supersede the exercise of the police power of the States in respect to a subject on which it has not acted cannot be inferred merely from the fact that such subject has been investigated under its authority.

The statute of Georgia of 1908, Civil Code, §§ 2697, 2698, requiring railroad companies to use locomotive headlights of specified form and power, is not unconstitutional either as a denial of equal protection of the law, as deprivation of property without due process of law, or as an interference with interstate commerce.

135 Georgia, 545, affirmed.

THE facts, which involve the constitutionality of the Locomotive Headlight Law of Georgia, are stated in the opinion.

Mr. Henry L. Stone, with whom *Mr. Alfred P. Thom*, *Mr. Alexander Hamilton* and *Mr. Robert C. Alston* were on the brief, for plaintiff in error:

The act known as the Georgia Headlight Law is viola-

tive of the due process clause of the Fourteenth Amendment. *Addyston Pipe Co.* v. *United States*, 175 U. S. 211; *Allgeyer* v. *Louisiana*, 165 U. S. 578, 589; *Baxendale* v. *Railway Co.*, 5 C. R. (N. S.) 336; *Bement* v. *National Harrow Co.*, 186 U. S. 70; *Bonnett* v. *Vallier*, 17 L. R. A. (N. S.) 492; *Bracewell Coal Co.* v. *People*, 147 Illinois, 66; *C. H. & D. R. Co.* v. *Bowling Green*, 41 L. R. A. (Ohio) 422; *Cleveland, C., C. & St. L. Ry. Co.* v. *Connersville*, 37 L. R. A. (Ind.) 175; *Cleveland* v. *Clements Bros. Co.*, 59 L. R. A. (Ohio) 775; *Dobbins* v. *Los Angeles*, 195 U. S. 223; Elliott on Railroads, 2d ed., § 668; *Id.*, Vol. 2, Note, p. 24; *Harbison* v. *Knoxville Iron Co.*, 103 Tennessee, 421; *Health Department* v. *Trinity Church*, 145 N. Y. 32, 41; *Houston & Tex. Cent. R. R. Co.* v. *Mayes*, 201 U. S. 321, 329; *Hollister* v. *Benedict Mfg. Co.*, 113 U. S. 59; *Int. Com. Comm.* v. *Balt. & Ohio R. R. Co.*, 43 Fed. Rep. 52; *Int. Com. Comm.* v. *Chicago G. West. Ry.*, 209 U. S. 108; *Lawton* v. *Steele*, 152 U. S. 133; *McLean* v. *Arkansas*, 211 U. S. 547; *Mo. Pac. R. Co.* v. *Humes*, 115 U. S. 512; *Nat. Phonograph Co.* v. *Sehlegel*, 128 Fed. Rep. 733; *Ritchie* v. *People*, 154 Illinois, 98, 29 L. R. A. 79; *Shelbyville* v. *C., C., C. & St. L. Ry. Co.*, 146 Indiana, 66; *United States* v. *Palmer*, 128 U. S. 262, 271; *Welch* v. *Swasey*, 214 U. S. 105; *Wisconsin* v. *Kreutzberg*, 58 L. R. A. 748, 751.

The act violates the equal protection clause of the Fourteenth Amendment. *Cotting* v. *Kansas City Stock Yards*, 183 U. S. 79; *Dobbins* v. *Los Angeles*, 195 U. S. 223; *Gulf Col. & S. Fe R'y Co.* v. *Ellis*, 165 U. S. 150; *Harding* v. *People*, 43 N. E. Rep. 624; *Henderson* v. *New York*, 92 U. S. 259; *Lochner* v. *New York*, 198 U. S. 45; *Los Angeles* v. *Hollywood Cemetery*, 57 Pac. Rep. 153; *Yick Wo* v. *Hopkins*, 118 U. S. 356.

The act is unenforcible and void under the commerce clause of the Federal Constitution and because Congress by its legislation has preëmpted and occupied the field of regulation of the same subject-matter.

The act interferes with and places a burden upon interstate commerce. *Adams Exp. Co.* v. *Kentucky*, 214 U. S. 218, 223; *Atl. Coast Line* v. *Wharton*, 207 U. S. 328, 334; *Bowman* v. *C. & N. W. R. Co.*, 125 U. S. 465; *Cooley* v. *Board of Wardens*, 12 How. 299; *Covington Bridge Co.* v. *Kentucky*, 154 U. S. 204, 209; *Hall* v. *DeCuir*, 95 U. S. 485; *Henderson* v. *New York*, 92 U. S. 259; *Un. Pac. Ry.* v. *Chic., R. I. & Pac. Ry.*, 163 U. S. 564; Rev. Stat., § 5258; *Welton* v. *Missouri*, 91 U. S. 275; *West. Un. Tel. Co.* v. *Kansas*, 216 U. S. 1.

Congress by its legislation has preëmpted and occupied the field of regulation of the same subject-matter, to the exclusion of state legislation. See acts of March 2, 1893, known as the Safety Appliance Act, 27 Stat. 531; March 2, 1903, amending Safety Appliance Act, 32 Stat. 943; May 27, 1908, authorizing investigations for safety of railway operation, 35 Stat. 324, c. 200; April 14, 1910, supplemental of the Safety Appliance Act, 36 Stat. 298, c. 160; May 6, 1910, reports of accidents, 36 Stat. 350, c. 208; May 30, 1908, as to ash pans, 35 Stat. 476; February 17, 1911, see also the statutes relating to boilers and appurtenances, and to the hours of service. See also the Employers' Liability Act, and the act of March 4, 1911, as to investigations, 36 Stat. c. 285, § 1, p. 1397, and the Act to Regulate Commerce, § 1; *Adams Exp. Co.* v. *Croninger*, 226 U. S. 491; Block Signal Board's Final Report to Int. Com. Comm., June 29, 1912, pp. 14–15; *Chic., B. & Q. R'y* v. *Miller*, 226 U. S. 513; *Chic., St. P., M. & O. Ry.* v. *Latta*, 226 U. S. 519; *Chic., R. I. & Pac. R'y* v. *Hardwick Elevator Co.*, 226 U. S. 426; *Chic., R. I. & Pac. Ry. Co.* v. *Arkansas*, 219 U. S. 453, 466; *Employers' Liability Cases*, 223 U. S. 1, 55; Interstate Commerce Commission's Rules, promulgated March 13, 1911; Twenty-fourth Ann. Rep. to Congress, December 21, 1910, pp. 44–47, and pp. 173–189; *Johnson* v. *So. Pac. Co.*, 196 U. S. 1; *Mich. Cent. R. Co.* v. *Vreeland*, 227 U. S.

59; *N. Y., N. H. & H. R. Co.* v. *New York*, 165 U. S. 628, 632; *N. Y. C. & H. R. R. Co.* v. *Hudson County*, 227 U. S. 248; *Nor. Pac. R'y* v. *Washington*, 222 U. S. 370; *Southern Ry. Co.* v. *United States*, 222 U. S. 20; *Southern R'y Co.* v. *Reid*, 222 U. S. 424; *Southern Ry. Co.* v. *Reid & Beam*, 222 U. S. 444; *B. & O. R. Co.* v. *Indiana Railroad Commission*, 196 Fed. Rep. 690, 699.

The brief contains a summary of the Headlight Laws in sixteen States.

Mr. Thomas S. Felder, Attorney General of the State of Georgia, for defendant in error:

Statutes of States of the character of the one under consideration, being designed for the protection of the property and lives of the people, are not unconstitutional because they may in a manner affect interstate commerce, nor do they violate the due process clause of the Fourteenth Amendment to the Constitution because an expense may be incurred in obeying their regulations. *N. Y., N. H. & H. R. R. Co.* v. *New York*, 165 U. S. 628; *Mo. Pac. Ry.* v. *Larabee Mills*, 211 U. S. 622; *Hennington* v. *Georgia*, 163 U. S. 299; *Smith* v. *Alabama*, 124 U. S. 465; *N. Y. & N. E. R. R. Co.* v. *Briston*, 151 U. S. 567; *Chicago, R. I. & P. R. R.* v. *Arkansas*, 219 U. S. 453; *Savage* v. *Jones*, 225 U. S. 501; *Southern Ry. Co.* v. *King*, 217 U. S. 524; *Chic., B. & Q. R. Co.* v. *Illinois*, 200 U. S. 561; *Reid* v. *Colorado*, 187 U. S. 137; *Asbell* v. *Kansas*, 209 U. S. 251; *Chic., M. & St. P. R. Co.* v. *Solan*, 169 U. S. 133; *Mo. Pacific Ry.* v. *Humes*, 115 U. S. 512; *N. C. & St. L.* v. *Alabama*, 128 U. S. 96.

The act does not violate the equal protection clause of the Constitution because it excepts from its operations tram, mill, and lumber roads. This would seem to be a wise and reasonable classification. *Chic., R. I. & Pac. R. Co.* v. *Kansas*, 219 U. S. 453; *New York, N. H. & H. R. Co.* v. *New York, supra; People* v. *New York &c.*, 56 Hun,

409; *Missouri &c. R. Co.* v. *State*, 121 S. W. Rep. 930 (Ark.); *Chicago &c. R. Co.* v. *Railroad Com'rs*, 90 N. E. Rep. 1011.

The contention that the act exempts from its operations railroads operated by receivers is not tenable. The act does not by its terms exempt receivers of railroads. A court would order its officer to comply with the terms of the statute and equip the locomotives with the headlights required.

The statute does not interfere with the right of the railroad company to contract. *New York & New England R. Co.* v. *Bristol*, 151 U. S. 556, 567; McGehee on Due Process of Law, 345.

It is not a taking of property without due process of law, in contemplation of this provision of the Constitution, because the railroad, in order to comply with the statute, would have to discard the headlights used by it, which it considers are good headlights, and to replace the same with the headlights required under the act. All property is held subject to the police regulations of the State. *Chi., B. & Q. R. Co.* v. *Illinois*, 200 U. S. 561; *New York, N. H. & H. R. Co.* v. *New York*, 165 U. S. 628; *Bacon* v. *B. & M. R. Co.*, 76 Atl. Rep. 128 (Vt.); *Munn* v. *Illinois*, 94 U. S. 113; *Missouri Pac. R. Co.* v. *Humes*, 115 U. S. 512.

The legislature may prescribe in detail the kind of light which should be used, and may also designate the size of the reflector as well as the number of watts that should be used. The intensity of an electric light is measured by the watt, and the reflector increases the breadth and intensity of the light, as was well known to the legislature. *Chesapeake &c.* v. *Manning*, 186 U. S. 238; Freund on Police Power, § 34; *Atchison &c. R. R. Co.* v. *Matthews*, 174 U. S. 96, 102.

This statute is in the interest of the public and its wisdom cannot be questioned by the courts. The public

policy of the Government is to be found in its statutes and when the law-making power speaks upon a particular subject over which it has constitutional power to legislate, public policy in such cases is what the statute enacts. *Logan* v. *Postal Tel. Co.*, 157 Fed. Rep. 570, 587; *United States* v. *Freight Association*, 166 U. S. 340; *Chi., B. & Q. R. R. Co.* v. *McGuire*, 219 U. S. 549, 569.

The subject has not been acted upon in any way by Congress or by the Interstate Commerce Commission, directly or indirectly. The act does not in any way conflict with any act of Congress or any rule or regulation of the Interstate Commerce Commission, and in the absence of such conflict the Federal courts will not declare the act invalid as interfering with interstate commerce. *Savage* v. *Jones*, 225 U. S. 501, 533; *Mo. Pac. Ry.* v. *Larabee Mills*, 211 U. S. 612, 623; *Reid* v. *Colorado*, 187 U. S. 137, 148.

MR. JUSTICE HUGHES delivered the opinion of the court.

The Atlantic Coast Line Railroad Company, the plaintiff in error, was convicted of violating a statute of the State of Georgia known as the 'headlight law.' Pub. Laws (Ga.), 1908, pp. 50, 51; Civil Code, §§ 2697, 2698. In defense it was insisted that the act contravened the commerce clause and the Fourteenth Amendment of the Constitution of the United States. On appeal from the judgment of conviction the Court of Appeals of the State of Georgia certified the questions thus raised, together with others involving the application of the state constitution, to the Supreme Court of the State. Answering these questions, that court sustained the validity of the statute (135 Georgia, 545), whereupon final judgment was entered and this writ of error was sued out.

The material portions of the statute are as follows:

"Section 1. Be it enacted by the General Assembly of Georgia, and it is hereby enacted by authority of the same, That all railroad companies are hereby required to equip and maintain each and every locomotive used by such company to run on its main line after dark with a good and sufficient headlight which shall consume not less than three hundred watts at the arc, and with a reflector not less than twenty-three inches in diameter, and to keep the same in good condition. The word main line as used herein means all portions of the railway line not used solely as yards, spurs and sidetracks.

"Section 2. Be it further enacted, That any railroad company violating this Act in any respect shall be liable to indictment as for a misdemeanor in any county in which the locomotive not so equipped and maintained may run, and on conviction shall be punished by fine as prescribed in Section 1039 of the Code of 1895. . . .

"Section 4. Provided this Act shall not apply to tram roads, mill roads and roads engaged principally in lumber or logging transportation in connection with mills."

The contention is made that this act deprives the company of its liberty of contract, and of its property, without due process of law. It compels the disuse of a material part of the company's present equipment and the substitution of a new appliance. The use of locomotive headlights, however, is directly related to safety in operation. It cannot be denied that the protective power of government, subject to which the carrier conducts its business and manages its property, extends as well to the regulation of this part of the carrier's equipment as to apparatus for heating cars or to automatic couplers. The legislature may require an adequate headlight, and whether the carrier's practise is properly conducive to safety, or a new method affording greater protection should be substituted, is a matter for the legislative judgment. But it is insisted that the legislature has gone beyond the

limits of its authority in making the specific requirements contained in the act as to the character and power of the light and the dimensions of the reflector. This argument ignores the established principle that if its action is not arbitrary—is reasonably related to a proper purpose—the legislature may select the means which it deems to be appropriate to the end to be achieved. It is not bound to content itself with general directions when it considers that more detailed measures are necessary to attain a legitimate object. Particularization has had many familiar illustrations in cases where there has been a conviction of the need of it, as, for example, in building regulations and in provisions for safeguarding persons in the use of dangerous machinery. So far as governmental power is concerned, we know of no ground for an exception in the case of a locomotive headlight.

It cannot be said that the legislature acted arbitrarily in prescribing electric light, in preference to others, or that, having made this selection, it was not entitled to impose minimum requirements to be observed in the use of the light. Witnesses for the plaintiff in error, including its general superintendent of motive power and other employés holding important positions and conversant with the exigencies of operation, presented their objections to the use of the electric headlight. Locomotive engineers who for many years had driven locomotives with such a light testified for the State, expressing a decided opinion in favor of the use of electric headlights in the interest of safe operation and submitting their views in answer to the objections that had been urged. Assuming that there is room for differences of opinion, this fact does not preclude the exercise of the legislative discretion. So far as the question was one simply of expediency—as to the best method to provide the desired security—it was within the competency of the legislature to decide it. *N. Y. & N. E. R. R. Co.* v. *Bristol*, 151 U. S. 556, 571; *C., B. & Q.*

Ry Co. v. *Drainage Com'rs*, 200 U. S. 561, 583, 584; *McLean* v. *Arkansas*, 211 U. S. 539, 547, 548; *C., B. & Q. R. R. Co.* v. *McGuire*, 219 U. S. 549, 568, 569, and cases there cited.

As to the objection that the statute makes no provision for conditions beyond the carrier's control, it is sufficient to say that in the light of the construction placed upon the act by the Supreme Court of the State, we are not at liberty to regard it as open to this criticism (135 Georgia, pp. 561, 562); certainly, no such case is here presented. We conclude that there is no valid objection to the statute upon the ground that it deprives the carrier of liberty or property without due process of law.

The further contention is that the statute offends in denying to the plaintiff in error the equal protection of the laws. Specifically, the complaint is that the act does not apply to receivers operating railroads, and that it expressly excepts tram roads, mill roads and roads engaged principally in lumber or logging transportation in connection with mills. As to the first, it cannot be said that the act does exclude receivers from its requirements. The state court has ruled that the words 'railroad company' in the statute include natural persons as well as corporations. It declined to decide that receivers were not included; but, conceding, without deciding, that they were not, it was held that the statute would not for that reason violate the equal protection clause in view of the temporary and special character of receivers' management. 135 Georgia, pp. 555, 556. We concur in this view. As to the exceptions made by the statute of tram roads, mill roads, etc., it is impossible to say that the differences with respect to operation and traffic conditions did not present a reasonable basis for classification. *Lindsley* v. *Natural Carbonic Gas Co.*, 220 U. S. 61, 78, 81; *Barrett* v. *Indiana*, 229 U. S. 26, 30; *German Alliance Ins. Co.* v. *Kansas*, 233 U. S. 389, 418.

Finally, it is urged that the statute constitutes an unwarrantable interference with interstate commerce. The locomotive, with respect to which the accusation was made, was at the time being regularly used in the hauling of interstate freight trains over the company's main line of railroad and was equipped with an oil headlight. The statute, as the Supreme Court of the State said, was not directed against interstate commerce, but it was held that it incidentally applied to locomotives used in hauling interstate trains while these were moving on the main line in the State of Georgia. This being so, the act is said to be repugnant to the exclusive power of Congress. It is argued that if Georgia may prescribe an electric headlight, other States through which the road runs may require headlights of a different sort; that, for example, some may demand the use of acetylene and that others may require oil; and that, if state requirements conflict, it will be necessary to carry additional apparatus and to make various adjustments at state lines which would delay and inconvenience interstate traffic.

The argument is substantially the same as that which was strongly presented to the court in *New York, New Haven & Hartford R. R. Co.* v. *New York*, 165 U. S. 628, where the plaintiff in error was held subject to penalty for the violation of a New York statute which in substance made it unlawful for any steam railroad doing business in that State to heat its passenger cars, on any other than mixed trains, by any stove or furnace kept inside of the car or suspended therefrom. The railroad company was a Connecticut corporation having but a few miles of road within the State of New York and operating through trains from New York through Connecticut to Massachusetts. As this court said in its opinion, the argument was made that 'a conflict between state regulations in respect of the heating of passenger cars used in interstate commerce would make safe and rapid

transportation impossible; that to stop an express train on its trip from New York to Boston at the Connecticut line in order that passengers may leave the cars heated as required by New York, and get into other cars heated in a different mode in conformity with the laws of Connecticut, and then at the Massachusetts line to get into cars heated by still another mode as required by the laws of that Commonwealth, would be a hardship on travel that could not be endured.' But the court ruled that these 'possible inconveniences' could not affect 'the question of power in each State to make such reasonable regulations for the safety of passengers on interstate trains as in its judgment, all things considered is appropriate and effective.' 165 U. S. 632, 633.

In thus deciding, the court applied the settled principle that, in the absence of legislation by Congress, the States are not denied the exercise of their power to secure safety in the physical operation of railroad trains within their territory, even though such trains are used in interstate commerce. That has been the law since the beginning of railroad transportation. It was not intended that pending Federal action the use of such agencies, which unless carefully guarded was fraught with danger to the community, should go unregulated and that the States should be without authority to secure needed local protection. The requirements of a State, of course, must not be arbitrary or pass beyond the limits of a fair judgment as to what the exigency demands, but they are not invalid because another State in the exercise of a similar power may not impose the same regulation. We may repeat what was said in *Smith* v. *Alabama*, 124 U. S. 465, 481, 482: "It is to be remembered that railroads are not natural highways of trade and commerce. . . . The places where they may be located, and the plans according to which they must be constructed, are prescribed by the legislation of the State. Their operation requires the use of instruments

and agencies attended with special risks and dangers, the proper management of which involves peculiar knowledge, training, skill, and care. The safety of the public in person and property demands the use of specific guards and precautions. . . . The rules prescribed for their construction and for their management and operation, designed to protect persons and property, otherwise endangered by their use, are strictly within the limits of the local law. They are not *per se* regulations of commerce; it is only when they operate as such in the circumstances of their application, and conflict with the expressed or presumed will of Congress exerted on the same subject, that they can be required to give way to the supreme authority of the Constitution." See also, *Nashville &c. Rwy. Co.* v. *Alabama*, 128 U. S. 96; *Hennington* v. *Georgia*, 163 U. S. 299; *N. Y., N. H. & H. R. R. Co.* v. *New York*, *supra; Lake Shore & M. S. Rwy. Co.* v. *Ohio*, 173 U. S. 285; *Missouri Pacific Rwy. Co.* v. *Larabee Mills*, 211 U. S. 612; *Missouri Pacific Rwy. Co.* v. *Kansas*, 216 U. S. 262; *Chicago, R. I. & Pac. Rwy. Co.* v. *Arkansas*, 219 U. S. 453; *Minnesota Rate Cases*, 230 U. S. 352, 402, 410.

If there is a conflict in such local regulations, by which interstate commerce may be inconvenienced—if there appears to be need of standardization of safety appliances and of providing rules of operation which will govern the entire interstate road irrespective of state boundaries —there is a simple remedy; and it cannot be assumed that it will not be readily applied if there be real occasion for it. That remedy does not rest in a denial to the State, in the absence of conflicting Federal action, of its power to protect life and property within its borders, but it does lie in the exercise of the paramount authority of Congress in its control of interstate commerce to establish such regulations as in its judgment may be deemed appropriate and sufficient. Congress, when it pleases, may give the rule and make the standard to be observed on the interstate highway.

It is suggested that Congress has acted in the present instance. Reference is made to the act of March 2, 1893, c. 196, 27 Stat. 531, relating to power driving-wheel brakes for locomotives, grabirons, automatic couplers and height of drawbars; to the act of March 2, 1903, c. 976, 32 Stat. 943, amending the act of 1893; to the act of May 27, 1908, c. 200, 35 Stat. 317, 324, 325, authorizing the Interstate Commerce Commission to keep informed regarding compliance with the Safety Appliance Act and to investigate and report on the need of any appliances or systems intended to promote the safety of railway operations; to the act of May 30, 1908, c. 225, 35 Stat. 476, relating to locomotive ash pans; to the act of April 14, 1910, c. 160, 36 Stat. 298, relating to sill steps, hand brakes, ladders, running boards and hand holds and providing that the Interstate Commerce Commission should after hearing designate the number, dimensions, location and manner of application of these appliances and of those required by the act of 1893; to the detailed regulations prescribed by the Commission, on March 13, 1911, pursuant to this authority; to the act of May 6, 1910, c. 208, 36 Stat. 350, requiring the Commission to investigate accidents and make report as to their causes with such recommendations as they may deem proper; and to the act of February 17, 1911, c. 103, 36 Stat. 913, relating to locomotive boilers.

But it is manifest that none of these acts provides regulations for locomotive headlights. Attention is also called to the investigations conducted by what is known as the 'block-signal and train control board' (organized by the Commission) and the reports of that board with respect to sundry devices and appliances, including headlights. It does not appear, however, either that Congress has acted or that the Commission under the authority of Congress has established any regulation so far as headlights are concerned. As to these, the situation has not been altered by any exertion of Federal power and the

case stands as it has always stood without regulation unless it be supplied by local authority. The most that can be said is that inquiries have been made, but that Congress has not yet decided to establish regulations, either directly or through its subordinate body, as to the appliance in question. The intent to supersede the exercise of the State's police power with respect to this subject cannot be inferred from the restricted action which thus far has been taken. *Missouri Pacific* v. *Larabee Mills*, *supra*; *Savage* v. *Jones*, 225 U. S. 501, 533.

The judgment is affirmed.

Affirmed.